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INAUGURAL ADDRESS TO THE SOCIETY,

BY MR. J. F. HUTTON, J.P.,

THE PRESIDENT OF THE MANCHESTER CHAMBER OF COMMERCE.

[Delivered to the Members of the Society at the Manchester Athenæum, January 27th, 1885.]

I ESTEEM it a high honour to have been asked to preside over the first meeting of the Manchester Geographical Society. It is also an honour to my colleagues in the Chamber of Commerce, who have taken a very active interest in steps which must tend to the promotion and extension of commerce. Just five years back an attempt was made to found a Geographical Society in Manchester. The idea was first originated by the Bishop of Salford. He and the Bishop of Manchester, assisted by several of the professors of Owens College, and also by the president of the Chamber of Commerce—Mr. Armitage—and the directors, held a number of meetings at the Chamber of Commerce. Over 2,000 circulars were issued to merchants and manufacturers, but only 130 responded to the appeals, and of these about three-quarters were members of the Chamber of Commerce. The attempt was a failure—possibly Manchester thought we were sufficiently well informed—but certainly we had not considered nor realised that there are other mercantile nations who are competing for and studying the causes of that commercial success and supremacy which Great Britain has so long enjoyed, and that in geographical knowledge they have now surpassed us. It is a subject of surprise that in the most mercantile and in the greatest colonial nation of the universe there exists but one society for promoting geographical studies and for organising exploring expeditions, while in other countries they are numerous. In France there are 24, in Germany a similar number, in Portugal, Belgium, and even in Africa there are four

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or five Geographical Societies. When we see a continued lack of prosperity in old markets and in old grooves of trade, surely that is a clear sign of the necessity for the search of new ones; and it is high time to realise what other nations are doing, and to exert ourselves to know more of the world and of its resources. Unless we do this our commerce and our industries must decline, and England will be unable to maintain the high position she has so long held. Were there time to-night it would be beyond my power to enter fully into all the important points of geographical study, but I cannot refrain from thus pointing out the impolicy of our remaining indifferent to the condition of our neighbours, and to the resources and advantages offered to our commerce by the study of distant countries, and especially of our own vast possessions across the seas. Founding a geographical society means the determination to acquire a knowledge of every country, sea, river, and mountain, and to study the nature, condition, and needs of the people of the earth. The encouragement of such study is erecting one of the mainstays of commerce. Yet geography must rely upon commerce to procure much of that information which will be of the greatest advantage. The book of greatest antiquity which records any ideas of geography is that of Moses, the Book of Genesis. But the great geographical discoverers of ancient times were the Phœnicians. They were the pioneers of commerce, and the most enterprising merchants. Many of those interesting archœological discoveries made of late have revealed to us records of the ancient and wealthy sites of commerce in Egypt and of Nineveh, and also of Tyre and Sidon. Over 1,000 years before the Christian era, the coasts of the Mediterranean were studded by the cities founded by Phœnician traders and colonists. Their adventurous voyages extended even far down the West Coast of Africa, and up north to our own islands. They carefully kept concealed the sources of their trade; they maintained a monopoly which constituted one of the secrets of their wealth, and made them the merchant princes of their day. Ancient Greece contributed much to the geographical information of the world. Every scholar must remember the interest felt when poring over those graphic accounts of the tribes of the old world written by Herodotus. The expeditions of the Great Alexander formed another period which contributed much to the knowledge of Eastern countries. That important colony of Massilia or Marseilles, founded by the Phœnicians about 600 years before Christ, revealed to the world accounts of their adventurous sea voyages. In the fourth century before Christ, their leader, Pytheas, brought to light the secret of his forefathers. He reopened the tin mines of this country; he pushed on through our stormy seas to Iceland and to the Baltic, where he opened up an important trade in amber. Pytheas was the first to record observations of the great tides round our shores, and to attribute them to lunar attraction. Through the Romans geographical knowledge made great progress. Though the object of Rome was to conquer and colonise every country, she did not neglect her duty. She not only ruled but carefully studied the habits and the wants of the people; she surveyed each country, and to the Romans we owe those wonderful and lasting roads of which important and interesting traces still exist close to our own city. Strabo was one of the great geographers of antiquity whose works have come down to us. He was born in Asia Minor about 50 years before Christ, and travelled throughout all the then known world. Pliny succeeded him, and after recording his geographical researches perished in the ruins of Pompeii. Ptolemy gave a full account of all the knowledge of his day. He and Marinus, the Tyrian traveller in the second century of this era, informed the world that the sources of the Nile were among the equatorial lakes and mountains of Central Africa, and which during the past 30 years has been proved to be correct. Afterwards geographical discoveries seem to have ceased. The decline in the power of Rome stopped all progress. In the fifth century, wild hordes from Eastern and Northern Europe burst forth and broke down all barriers; civilisation ceased, and ruin and terror were spread throughout Europe. No records exist of any new and reliable discoveries made during the eight centuries which followed; but in the Royal Geographical Records of January there is a very interesting though mythical annal of the voyages of the Norwegians, who in the ninth century founded settlements in Iceland and Greenland. According to this narrative, Newfoundland was discovered at the end of the tenth century by Eric, a Norwegian refugee, and it was then called "Vinland the good"—a land termed "rich in fruits and choicest wine." The merchants of Venice and of Genoa were the great geographers and traders of the thirteenth century. Marco Polo, a noble of Venice, at the close of that century travelled with his father through Persia, India, and China. He lived over twenty years among the Tatars, and on returning to his native city found others in possession of his house and property, and his fellow citizens could or would not recognise him. It is to the genius and enterprise of the navigators of Spain and Portugal, towards the close of the fifteenth century, we owe the discovery of several of the Atlantic Islands, of South Western Africa, and also of the River Congo by Diego Cam. But the great event of that period was the memorable voyage of Christopher Columbus across the Atlantic, and the discovery in 1492 of that vast continent, America. There appeared at once a new era, and an universal desire to seek worlds across the seas. English pioneers, led by Cabot and Raleigh, quickly followed Columbus to America. They sought new homes on the Northern Continent. So glowing were the descriptions of these new countries that Spain, Portugal, France, and England vied with each other in pushing forward further discoveries, and in scrambling to secure possession of territories in the East as well as in the West. In 1497, Vasco de Gama discovered the passage round the Cape to the East. His enterprising though small country, Portugal, opened up direct trade by sea with Eastern Africa, with India, and with China. She was then without a rival in her Eastern commerce. Shortly after, the Spanish Moor Leo brought to light much interesting information about the interior of Africa. He had tramped through on foot, and when taken a prisoner to Rome he related to Pope Leo wonderful accounts of the great rivers and tribes he had visited. He first told the world of the immense extent of those Central African lakes, and that the Congo as well as the Nile flowed out of them. During the latter half of the sixteenth and commencement of the seventeenth century the Dutch shone with great lustre as geographical discoverers. To them we owe the discovery of our great Eastern colonies of Australia and New Zealand, which appear destined to rival the power and wealth of our former colonies of the West. The consequences of all these Eastern and Western discoveries have been momentous in the history of the world, in the extension of civilisation and of Christianity, and in the development of trade. International jealousies and quarrels soon became rife on all these annexations of new lands. European wars quickly followed, and thereby England was enabled to obtain supremacy on the seas, to extend her dominions East and West, and to spread her commerce over every known country in the world. During the present century, France, Great Britain, and Germany have taken the lead in fitting out exploring expeditions to the various quarters of the globe. Latterly Central Africa has attracted more travellers than any other region. At the commencement of this century the names of Bruce and Mungo Park were on every tongue. Those of Laing, Lander, and Denham are also recorded among our modern African discoverers. But it is during the past thirty years we have had brought to light so much of those great inland seas and lofty mountains, as well as of those broad rivers and vast populations existing in the heart of Africa. Much of what Ptolemy and Leo recorded was considered as fables. The Portuguese of the sixteenth century engraved them on their charts, but until the last few years Central Africa was marked a desert—it was a blank in British maps. The Royal Geographical Society of London fitted out one of the first expeditions to Central Africa. Their eminent travellers, Burton, Speke, and Grant, were the earliest in establishing the certainty regarding those great inland seas, Victoria Nyanza and Tanganyika. Sir Samuel Baker, accompanied by his courageous and young wife, discovered the Albert Nyanza, and they and General Gordon brought to completion the searches for the sources of the Nile. Captain Cameron added something to our knowledge of Central Africa, but it was the renowned Livingstone who, in searching for the sources of the Nile, discovered and revealed to us those of the great Congo river. We all know his patient endurance and his sad end, and how Stanley, determined to complete his work, followed to the sea the whole course of the Congo, and brought to light the important nature of that vast river, and of its dense populations and the influence they may have on our future trade. Another young but renowned traveller—Joseph Thomson—the cause of whose absence we all must regret, would have given us to-night an account of that mountainous and interesting Masai country between the Indian Ocean and Victoria Nyanza which had never previously been traversed by any European. All will probably remember the interesting story of his first journey in Africa when only 21, when his leader died in the interior, and Thomson had the courage and determination to go on alone with his native carriers and complete the work undertaken by Keith Johnston for the Royal Geographical Society. We shall no doubt hear to-night from another distinguished African traveller—Consul Holmwood—some account of the country and tribes around Zanzibar. He has for a number of years resided in that part of Africa, and immediately on hearing of Thomson's illness he offered to come down and assist us in our inauguration meeting. It only remains now to consider what has been their effect on mankind, and especially on our own country. Geography was the foundation of the commerce of the Phœnicians, the Greeks, and the Romans. It enlightened Italy, Spain, Portugal, and Holland regarding the wealth of the new world. It filled them with enthusiasm to found colonies for their unsettled populations, and to spread Christianity, civilisation, and commerce throughout the East and the West. The valuable products which their intelligence and industry obtained became a new source of that prosperity and wealth of which so many signs are still visible in the old cities of these countries in Europe. But there is no country in the world which has so profited by these discoveries as Great Britain, both at home and through her colonies. Each new possession added to the enterprise of her merchants, and gave an incentive to young men to visit those lands, teeming with all that nature and labour could produce. There they founded new homes, and constituted one of the sources of the prosperity which England has enjoyed. It is in visiting some of the ancient cities of Italy, of Spain, Portugal, and Holland we see what commerce they founded and how their wealth has decayed. Contrast their venerable and artistic palaces and monuments and the silent streets of to-day with the thriving activity of our own seaports and industrial towns. Should not this make us consider what may be our own future if we neglect to discharge those duties and responsibilities we all have to fulfil? As in former times geographical study and expeditions bore fruit for the sons of men, so now should our new Society take its part in following up and in striving to appreciate the noble deeds of our forefathers. To carry out some good and advantageous work each country, the same as each individual, has its day and its opportunity. When we reflect over the condition of the countries of the pioneers of old, and when we compare their lot with the progress and position of Great Britain we ought to be filled with an earnest determination not to let our opportunity pass. Let us therefore commence our work in earnest, and with the conviction that our opportunity has come, and the Geographical Society of Manchester must be such a success as will benefit and promote the welfare and the happiness of our fellow-citizens of to-day and of the future.

CENTRAL AFRICA AND THE CONGO BASIN; OR, THE IMPORTANCE OF THE SCIENTIFIC STUDY OF GEOGRAPHY.

By Mr. H. M. STANLEY.

[An Address to the new Geographical Society of Manchester, delivered in the Free Trade Hall, October 21, 1884.]

CONCERNING the merits of a Geographical Society, there are numbers of very eminent men in your own city more qualified to speak than I. If it were indicated to you, for instance, that Mr. Slagg, with his fluency of speech, his noble address, his various attainments, his conscientious industry in all matters that affect your great city, and his unflagging interest in the success of this meritorious institution, you would appreciate the fitness of electing him to perform the part of inaugurator, or initiator of this scientific enterprise, as well as being the presiding chairman during this address. But since you care to hear my ideas upon the subject, with your very good leave let me ask you to join me in viewing geographical science as it affects Africa, and from an African traveller's standpoint.

And first of all let us look well at the position whence we propose to take our view of geography. We know it for a fact that London has a very powerful Geographical Society under Royal patronage. As the metropolis of this British Empire it follows as a matter of course that there should be a hall wherein all that appertains to the study of the science should be diligently studied, and a body of men devoted to it; but then it appears to me that London, large as it is, possesses no more intrinsic interest in it than does Liverpool, Manchester, Glasgow, Edinburgh, Newcastle, Hull, Bristol, or Plymouth. The reasons why London should be interested in it are also applicable to every large seaport or manufacturing town in this kingdom. Their ships, or their products of loom and forge, are despatched to every point of this globe possessing a mart, and to an enterprising shipowner, or an enterprising manufacturer, if he wishes to know his business well, it is essential that he should know something of geography; and why should it not be a subject of interest to the merchant's clerk and book-keeper, or to the manufacturer's assistants, employees, clerks, and packers—aye, even down to the smallest boy of the factory, and to extend the question further, why should it not be studied by every resident, male or female, of this country?

We are told that there are 35,000,000 of people in Great Britain and Ireland. Take the larger and lesser island, and the people that the area of cultivable soil of these islands is able to support cannot exceed 6,000,000. Those 29,000,000, or by this time 30,000,000, are fed then by what is imported from abroad.

What is abroad? To give a geographical definition of this one word would require a portentously large volume; but if you picture or delineate it on a map, the outlines of abroad could be sufficiently made known to you on a small sheet, whereon you would see, printed in large letters, Europe, Asia, Africa, America, and Australia, with the large oceans named Atlantic, Pacific, Indian, Antarctic, and Arctic, and set apart isolated from the large area of land you see delineated before you, there is a mere dot or dots, as it were, called the islands of Great Britain and Ireland, which, as you all know, have nearer relations with the other places marked on the outskirts of those continental configurations before you than any other small dot or dots found there. Those small island dots at the northern part of the Atlantic Ocean represent this United Kingdom with its millions of cunning workmen, its thousands of screaming locomotives darting across from shore to shore, its thousands of groaning factories, its never-dying hum and murmur of labour, and rush and rapid movement of earnest life. On such a small sheet, for instance, how, without a microscope, could you discover the locality of this busy city of Manchester, whose awakening, as a great philosopher put it, resembles on "a Monday morning at half-past five of the clock, the boom of an Atlantic tide—sublime as a Niagara—with the noise of her thousand mills, and the spinning of ten thousand times ten thousand spools and spindles." That local knowledge which you have of your great city, and which makes you realise the vividness of the picture, may be called geographical knowledge of an infinitesimal quantity. Supposing this knowledge was also extended to London, at once you realise the picture presented by Mayhew of the "strange incongruous chaos of the most astounding riches and prodigious poverty, of feverish ambition and apathetic despair, of the highest charity and the darkest crime, the great focus of human emotion, the scene of countless struggles, failures, and successes, where the very best and the very worst types of civilised society are found to prevail, where there are more houses and more houseless, more feasting and more starvation, more philanthropy and more stony-heartedness than in any other spot in the world!" To you who have been there and know what London means, this picture appears nothing exaggerated.

To many a beginner in life in this England of yours London appears to be the place best suited to his ambition, because he has a dim perception that there he will find the best market for whatever merits he may be endowed with. He has heard of London from his fellows, his relatives, his friends; he has read of London in books and journals, and the hope is inspired in him from the knowledge thus gained that there he may dispose himself to the best advantage. As London, or, in fact, any great city, presents itself to the mind of the ambitious and well-meaning rustic, so the knowledge gained by the capitalist, the manufacturer, the shipper, the civil engineer, the mechanic, the miner, of abroad, or the world at large, is sought to be utilised, with the same view and purpose. There are great enterprises requiring the capitalists' assistance waiting to be accomplished, there are markets abroad for the manufacturer, there are ports requiring ships from the shipowner, there are countries to be surveyed by the civil engineer, bridges and railways to be constructed, there are forges elsewhere for the deft mechanic, mines of precious ore and coal for the miner, and there are large areas to be tilled by the agriculturist and farmer. Some kind of geographical knowledge is necessary before any of these hopes can be realised. To him or those who possess it, the configurations on the world chart appear as clearly defined as though they were the outlines of a man's real estate—the world is only a huge breeding-farm, and the various ports round about the shores are like so many stalls at a market-place—and the people therein are only so many vendors and buyers.

It is by some recognition of this fact that the study of geography had a practical value and benefit for the fathers of the modern English people; that those islet dots in the North Atlantic came to have intimate relationship with the world at large, and little Britain expanded into that mighty dominion over islands and continents known as Greater Britain; that your gallant youths and brave men forsook home and kindred, and sailed over the seas to found empires in Eastern Asia, republics in America, and colonies in the West Indies, Australia, and the Cape of Good Hope. Why should Captain John Smith, or the Pilgrim Fathers, or that bold boy, Robert Clive, have gone away from their warm hearths straight to their various destinations, had they not known somewhat of the lands they were bound for? And if these men in the olden time, with their modicum of geographical knowledge of their destinations, produced such great results, why may we not expect that by the diffusion of this knowledge of the yet unknown earth and its products among the masses of the people, the souls of other men may not be stirred to strive for those advantages gained by the enterprising?

I am told that at No. 1, Savile Row, London, the Royal Geographical Society possesses charts, rolled up and snugly stored away all in due order, enough to cover acres upon acres of ground if they were spread out; and their collection is monthly growing larger. But of what particular use or benefit can this be to a merchant in Manchester who has a correspondent in some out-of-the-way place on the coast of Africa, so small and unimportant that your largest and latest maps contain no mention of it? or to a manufacturer of cotton cloths and cotton handkerchiefs who has been informed that a particular tribe just behind that same unimportant village, with whom his agent has opened connections, desires some specific stripe, pattern, or colour? The merchant or manufacturer desires naturally enough to know whereabouts that particular seashore village or tribe is located, and no literary club or society in a great city like Manchester can produce anything better than some antiquated school map or pocket map to satisfy his legitimate curiosity. Nor is there a book that will enlighten him in the least nearer than London.

But that great metropolis, great as it is, is but a small portion of Great Britain, and I should say that Liverpool, or Glasgow, or Birmingham, or Manchester, has as many business correspondents in various parts of the world as London has, and it appears to me that if a geographical society is useful for London, a geographical society would be no less useful for any great seaport and manufacturing city in Great Britain. You will observe that I am speaking of a society of geography, not as an ornamental addition to a great city, but from an utilitarian point of view, I would wish it to be of real use and interest to you, otherwise I would admit that the Royal Society of Geography was sufficient for the United Kingdom, and that one museum of maps and books relating to the topography, hydrography, geology, and ethnography of the countries of the world, was quite enough. I would wish to disseminate this knowledge of geography amongst you and the peoples of other great cities in England that any time you would feel a desire to extend your enterprises to foreign shores, you might, by reference to the maps and books of your local society, be able to know how to set about it—what hopes the country you had in mind offered to your enterprises, what difficulties you would have to encounter, and what rewards were in store for you. I would wish you to be able to follow the promoter of any mercantile enterprise intelligently, each with his own best judgment, not blindly or rashly, and to measure justly the value of the advantages he offers. It has been told to you before, doubtless, and it may be said again, that geographical knowledge clears the path for commercial enterprise, and commercial enterprise has been in most lands the beginning of civilisation. Cæsar was the first explorer in this limited kingdom, but geographical knowledge of Britain took longer time to be diffused among the peoples of Rome than that of Africa will take among the people of England. For centuries after Cæsar's invasion and Agricola's circumnavigation of the island, the young patricians of Rome regarded with horror expatriation from their sunny land, amid the fogs and aguish colds of Britain, just as the patricians of Britain to-day would regard compulsory service under the equatorial sun of Africa.

For centuries Marco Polo's dictum respecting a fertile and commercial region now occupied by French soldiers, and exploited by French merchants—I refer to Tonquin—was accepted as true until French and English explorers proved it to be the reverse. Said he, "The country is wild, and hard of access, full of great woods and mountains which it is impossible to pass, the air is so impure and unwholesome, and any foreigner attempting it would die for certain." How many places have been reported in a similar manner to have such impure air, and to be so unwholesome, until exact exploration prove the old stories to be no better than "old granny's fables" about the invisible bug-a-boos and hobgoblins which frighted our childhood. Take up any old map of Africa, and glance at the antique and grotesque creations of the Portuguese missionaries and travellers of the 15th and 16th century, and compare it with that of to-day illustrated by the travels of nearly 800 explorers. It is only now that we begin to have a rational idea what Africa is, and whether commercial enterprise is in any way possible. Before, it lay a huge unshapely mass, grimly outfigured on all maps, with an exasperating mystery and blankness about it, here and there relieved by illustrations which might be either lions or cats, elephants, and nameless antelope. It had an enormous coast-line of some 11,000 miles in length, sadly deficient in harbours and navigable rivers, and from a spot not far removed from the Cape of Good Hope, from a wide branching head, there winded the Nile along a circuitous course of about 10,000 miles towards the Mediterranean. Very few in those old days ever reasoned that if the Nile rose in such a close proximity to the Cape of Good Hope that its top-head must surely be in the very highest of high mountains to be all the long 10,000 mile way unnavigable. Yet when we come to think of it there must have been some reasoning of the kind by the manner in which the "Mountains of the Moon" so persistently adhered to the maps of our youthful days. Whether they did or not, it is strange that some de Soto or Speke did not strike across from Natal and launch a boat on its waters to float down past the towers and towns so plentifully disfiguring the old maps.

I am not a very old man, yet I remember very well that until late years my conception of the regions under the equator, and down to within the neighbourhood of Bechuana Land, was that a desert similar to that of the Libyan in colour and quality monopolised what I know now to be of matchless fertility.

Just think what the geographical knowledge of Africa that we possess to-day has cost in human life. Of those 800 explorers, who left comfortable bed and board to gain it for us, nearly two-thirds of this number have perished from disease and by murder. From Mungo Park down to Livingstone no continent that we know of can show such strenuous endeavour and persistent effort to clear the mystery and let light on the unknown. It is nearly ninety years ago since Mungo Park left the English factory of Pisania on the Gambia for the Niger. Ten years later he was drowned, while descending the Niger, in the rapids of Bussa, 500 miles from its mouth. Decade after decade witnessed the victims which the river demanded as the price of the knowledge of its course, until Richard Lander, with his brother John, floated down from Bussa, down the Niger, to the sea.

The geographical knowledge thus dearly bought led the way to the commercial enterprise of Macgregor Laird, in 1832. Scheme after scheme followed, ending in disaster, owing to the general ignorance of how to live under those new climatic conditious, until now the National African Company has established itself on a solid basis, and the enterprise is rewarded by a remunerative profit.

Let us look at the Cape of Good Hope. Bartholomew Diaz, in 1486, was the first navigator who reached that distant point of Africa. He planted a cross at Algoa Bay on the 14th September of that year, just 398 years ago. One hundred and sixty-six years later the Dutch East India Company sent 100 colonists to found a settlement there. Seventy-two years later the colonists had reached the Great Fish River. In 1815, at the Treaty of Paris, this country was ceded to the British Government, since which time, following fast after exploration and geographical knowledge, British authority has extended to the twenty-eighth parallel, and with the exception of that occupied by the Orange Free State, it has extended right across Africa. The value of the commercial intercourse with this region is now in round numbers £17,000,000 annually, though there are only about 300,000 whites in the 3,000,000 population which contributes to this trade.

But preceding this extension of commerce were the scientific, sporting, and missionary explorers. In reading their researches and travels, we are struck by the number of incidents attending each journey, how they wagoned across great expanses of arid regions with cattle dying by dozens from thirst, of disaster in the shape of onslaughts from savages, attacks from wild beasts, timid Hottentots skurrying away from every peril and leaving the brave Anglo-Saxon hearts all alone in the danger, and yet despite all their numberless mischances they bring away, one after another, that little handful of geographical knowledge which is required before a step is advanced by the civilisation which is invited to follow them. And after the considerate pause we see it gather courage, and press still further onward, to halt once more on the threshold of the unknown until the self-formed Intelligence Department has received exact information of the regions beyond from its exploring scouts, who have wandered far afield with sextant and chronometer and prismatic compass.

When you have rounded the Cape you are directly on the route which Vasco de Gama took in his little ships when he led the way to India 387 years ago. While letting ourselves contemplate mentally the length of wild sea-water that stretches from Cape St. Francis, in South Africa, to Cape Comorin, at the southern extremity of India, let us think of the prodigious commerce that has followed the geographical knowledge given us by the bold Portuguese navigator and his successors. With India, China, Australia, Japan, the Dutch East Indies, the East Coast of Africa, the Persian Gulf, Mauritius, Madagascar, and Natal, and the French Possessions, United Europe had a trade in 1882 of the value of nearly 450 millions of pounds sterling. The discovery of America by Columbus in like manner has caused a commerce to spring up during nearly a like period, which, in 1882, was of the value of £600,000,000.

But coming back to Africa again, to which I especially wish to draw your attention, and my remarks, wide as they have been, perhaps, from the main object, have been only a prelude to it. I have wished to excite your regard for geography by showing you as vividly as I can what the purpose of the study is, how it has been and is intimately connected with the growth of the British Empire, and with the rapid increase in population and importance of your own city, how it led the pioneers and founders of these vast trades that I have just mentioned away from their homes and kindred, to build new homes for British posterity in the Americas, to carve empires out of Asia, to plant colonies near the Antarctic Sea, and found young States in the midst of the Pacific Ocean. The effect and result of these travels, researches, and explorations of a host of bygone travellers is visible to-day in those tall columns of brick and the rolling volumes of black smoke that issue from their gullets, shot upward to the inky sky from the fires that drive those monstrous engines, and cause such an uproar in the bowels of this city; it is visible in the Black Country, whose steam hammers and mammoth rollers form and weld the plates and rails of iron which you send to a thousand seaports; it is visible in your ports of London, Liverpool, and Bristol, where you see the Thames, the Mersey, and the Severn vexed by the keels of numberless ships entering with grain, and cattle, and produce, and ore from all lands; it is visible in every great centre of industry and commerce throughout the British Empire.

Now, if you recognize all this, and duly appreciate the summit of grandeur to which you have attained, and can thoroughly divine the cause and large effect of what has already been accomplished by a few lessons in rudimental geography, and desire to maintain that supremacy in devising and doing, you must now turn your attention to other fields of study, because your success has excited the envy of many nations, and they have become competitors for whatever gifts of fortune enterprize can win. The Americans are now manufacturing their own cottons, and India exports some £16,000,000 worth of cotton fabric every year, and every nation in Europe manufactures its own cottons mainly, and this process will go on each year until there will be very little left of the world for a market for your own handiwork. Education of all peoples is growing and spreading, and with it development of handicraft skill. Lowell competes with Manchester, Pittsburg with Birmingham, the Delaware with the Clyde, New York with London and Liverpool, and in the course of a few decades there will be a hundred competitors in the market, therefore you must not lay the flattering unction to your souls, that because you are unsurpassed to-day in your enterprise and skill that it will remain ever thus. With you, as well as with the rest, there must be progress, enlightenment, advance, or the day is not far distant when you will be outstripped. And whereas you owe so much to geographical knowledge you must cherish that knowledge, and go on acquiring it, you must teach it to your youths, that when they arrive at manhood each may know that beyond these islands there lie vast regions where they also may carve out fortunes as their forefathers did in the olden time. You must extend it among the mature men, that by the exhibition of it they may be led to reflect, if in some little known part of this world there may not lie as rich markets as any now so earnestly competed for. That this knowledge may be accessible, and easy to obtain with all the light necessary for a perfect comprehension of it, some of your thoughtful and lofty-minded men of Manchester have proposed to form a geographical society right in your very midst, and I earnestly wish it the fullest success, and it is for this reason that I consented to show you some new markets in long-forgotten Africa, and to expatiate upon them with what knowledge I may possess.

If you look upon a map of Africa, you will find that it is dotted around with names of sea-ports, and landing-places, and sea-shore villages thickly enough; that here and there, as in the neighbourhood of the Nile and the northern coast of Africa, and at Cape Colony, more or less advance has been made towards the great body and heart of the continent. Round about the coast-line measures about 15,000 English miles, and if we measured 200 miles direct inland all round as the average depth of the country thoroughly exploited by commercial men, we should find that an area of about 3,000,000 square English miles is already contributing its produce and stuffs in exchange for European manufactures. But as Africa altogether contains an area of nearly 13,000,000 square English miles, we have a balance of 10,000,000 square miles open for us, and yet undeveloped. About 2,000,000 square miles of this must be set aside as untillable, by which we have 8,000,000 left—an area nearly two and a half times larger than Europe. It would be impossible to state accurately the population of this area, but as I have travelled and explored across Africa over some thirty-two degrees of longitude, and up and down some ten degrees of latitude, I have estimated, after various efforts at reasonable exactitude, that the population may be at the average rate of twenty-two souls to every square mile, which would give us a total of 176,000,000. In some favourable localities the population much exceeds this, as in Uganda, Urundi, in large portions of the Congo and the Niger basins. In the latter basin we find the native towns of Egga with 30,000 people, Sansanding about the same, Jenné with 10,000, Kano with 30,000, Yakoba with a population estimated at 150,000, and Birnie in the Chad district with 60,000. The Sokoto Empire is estimated to have a population of 13,000,000, which would give sixty souls to each square mile of its area. On the Congo we have clusters of villages extending along the banks from five to fifteen miles, as Bolobo, Lukolela, and Mangala; and in Irebu we have a small compact district, where the natives are so dense, that 100 to the square mile may be a fair estimate.

I would divide this 8,000,000 area and its population in this manner:—The Niger basin, with an area of 700,000 square miles, 23,000,000; the Nile basin, exclusive of Egypt, 900,000 square miles, with a population of 36,000,000; the Zambezi basin, 700,000 square miles in extent, populated by 10,500,000; the Congo basin, 1,300,000 square miles, with a population of 39,600,000; and the basin of the Chad and Shari, 300,000 square miles, with a population of 15,000,000. You have then a population of 50,000,000 to be divided over the remaining large area of 4,000,000, because this would embrace all the less favoured territories, the slopes of the mountain ranges, the wide, but thinly-peopled, territories of the Masai, the Kalahari desert, Fezzan and the Galla Land, and the western portion of Somali territory, the basins of the Jub and Limpopo.

Now the great river basins, the Niger and Chad-Shari, Nile, Zambezi, and Congo, are each accessible by widely different routes. The Niger and Chad-Shari market can best be reached by the delta of the Niger. A powerful company, called the National African, with a capital of £2,000,000, has been formed with the view of supplying this populous market. It is just thirty-two years ago since the commercial traffic, which only now begins to be remunerative, was properly started by Mr. Macgregor Laird. When we think of the prospects before it, its advance appears to be extremely slow. The natives are warlike and insolent, and seem inclined to dispute the advance of the trader. The middle men, who thrive upon the commissions they collect during the passage of the goods from the hands of the original sellers to the ultimate buyers, argue that if the white men are allowed to trade freely with those above them that their occupation will be gone. On such people the best argument would be, the presence of a Government Official who could guarantee the payment of a small subsidy with one hand, conditional upon free passage up and down the river, and with the other could show a small police force to punish the refractory. The result would be an immediate increase in the trade, and a steady advance into the populous interior, where, possibly, we might hear of some railway undertaking to Kuka on Lake Chad, and steam communication up the Shari. A railway 300 miles in length to reach a navigable river 500 miles in length and a lake 10,000 square miles in extent, for a trade with 15,000,000 of semi-civilised people, appears to me a very desirable project.

Then there is the Niger itself; a railway of 150 miles long from a point below Bussa to near Yauri, would give you 1,000 miles of the Upper Niger, by which you could supply some 18,000,000 of people above Bussa, as far as Timbuktu, Yawaru, Jenné, Sansanding, and Sego, where the Niger is as broad as the Thames at Westminster. Or a railway 300 miles long, from the head of navigation on the Rokel River, at the mouth of which Sierra Leone is situated, would take you to the Niger, and furnish you with a river navigation of 1,000 miles. The great kingdoms of Waday, Bagirmi, Bornu, and Sokoto would become commercial tributaries to this country by these railway enterprises, which any half-a-dozen rich capitalists of Manchester could cause to be made. That some effort has not been made is probably due to your ignorance of the little known geography of these regions, and to the indefiniteness and uncertain ideas which possess you generally respecting Western Africa. I fear also that the Government is a little to blame for its proneness to cast cold water upon such projects, fearing the increasing obligations that would be entailed by any sudden expansion of commercial thought and extension of enterprise of this kind. Where there is a will, however, there is always a way, and if your rich people take to such projects kindly, as in the olden time your forefathers amplified their businesses and built up this wide-spreading empire, the project I have indicated to you will seem but small compared to the rewards which always follow such high-spirited and broad-minded ventures.

That such a scheme is not impossible is proved by the fact that the French are actually building a railroad from the Senegal to Sego, to absorb a trade which should have been British. When it is completed they will have an opportunity to increase their trade to the extent of £30,000,000 annually. We may therefore, if you please, consider the major portion of the Niger Basin as closed to you, unless you may be prompted to run a race with the French. Though you are actually in possession of the lesser portion of the Niger Basin, I think you are as likely as not to lose some portion of the trade here, for the stout-hearted and persistent Germans have planted their standard, and propose to found a colony on its southern edge, and if their Government will subsidise this infant settlement judiciously, they can easily tap the upper portion of the Cross River, and the Binue, the main affluent of the Niger.

Let us glance at the Nile Basin. You are happily situated just at this juncture to be able to take an intelligent and live interest in the study of the basin. Though powerless to exert any influence, I fear, upon the policy of the Government, yet since your countrymen are there in such numbers, urged forward to the rescue of great Gordon, it is a curious question which we may well ask whether all the vast expense now being incurred will be productive of interest to industrious cities like your own. I am not one of that number that would wish to subjugate populous tribes and conquer regions solely for the sake of commerce, were it only that it is altogether unprofitable. If the Government, while pursuing its own policy, indirectly promotes commerce, then it would be a matter for congratulation; or, in other words, if the Government sees fit to retain Khartoum for high politic reasons, then undoubtedly such a course would indirectly promote commerce. But if it be argued that the Government should retain Khartoum because it would be advantageous to commerce, it does not follow that in the end it would be profitable. Commerce cannot thrive when based on unjustifiable violence.

But let us suppose that Egypt was permanently occupied and annexed to this Empire, it would be politic for Egypt's sake to retain Khartoum, and I should see no injustice to the step, because it is in reality a city in an upper province long ago annexed to Egypt. You might then be congratulated upon it, because it would thus be profitable to construct a railway from Suakim to Berber, by which you would gain easy access to a navigable river course over a thousand miles long to beyond Gondokoro, and some 500 miles up the Bahr Ghazal and its branches, and some 200 miles to Senaar, altogether about 2,000 miles. It is a populous basin—its products are manifold and various—and altogether, as a commercial field, a profitable one

The third great basin we have to consider is the Zambezi basin. This river is the third largest stream in Africa, the largest that issues out of Africa on the east, and has a length of 1,400 English miles. It is not so free of rapids as the other great African rivers; still, under a pushing government, it might be utilised to a great extent. There are two or three long stretches of navigable water which might be connected, and a means of communication effected to take one two-thirds of the way across Africa. But though explored by Livingstone in 1854, and again by Livingstone and Kirk in 1859, it yet remains in its pristine state of undevelopment and inutility. An affluent of it, called the Shiré, takes its rise in Lake Nyassa, is interrupted by rapids at a distance of about 70 miles, and, after an impassable course of a similar length, flows uninterruptedly a course of 300 miles to the sea south of Kilimani. A Scotch philanthropist, Mr. Stevenson, appears to have taken this affluent into his own hands, and by admirable perseverance, aided by the Free Church of Scotland, has succeeded in inaugurating a commercial development, now prosecuted successfully, I am told, by the African Lakes Trading Company of Glasgow. From the Murchison Falls to the northern end of Lake Nyassa, a distance of 420 miles, a steamer called the "Ilala" runs periodically. A carriage road, 210 miles in length, has been lately made to connect this lake with Lake Tanganika, which will give an additional waterway 360 miles long.

In this growing and promising development in the Shiré and Nyassa region you see an authentic illustration of what follows geographical knowledge and exploration. It is twenty-five years ago since Livingstone and Kirk first ascended the Shiré and discovered the Nyassa. That the development has been so tardy is owing entirely to the hostility of the Portuguese. It was only after repeated and persistent efforts of the Free Church of Scotland, and Mr. James Stevenson, of Glasgow, that a commencement could be made. The Court and Government of this country were wearied with the diplomatic tactics of the Portuguese, who protested and wrote, and presented the usual folios of traditions, and the contents of elastic and perennial archives to defraud Livingstone of the honour of the discovery of Lake Nyassa, and retard, if not check outright, all progress and civilisation. In the end, however, the restrictions placed by them on the Lower Zambezi were removed, and now it is a free river as far as the Shiré. The Zambezi River, however, and entire basin—though it is a thousand pities that such things should be—is no less an authentic illustration and evidence that no portion of Africa is susceptible of civilisation if it is barred by a hostile tariff.

Fourthly, and finally, we have to consider the Congo and its basin. Before we enter this broad domain, let us take an outside view of it, that we may consider its external aspect. And to do this properly, let us begin at the Cape, and take a mental view of its physical aspects, as we run north, along the west coast, and I may as well tell you that the eastern coast is, so far as height is concerned, its counterpart. Beginning, then, at the Cape, we view a mountain mass called Table Mountain, of some 3,500 feet, flanked by a massive feature called the Lion's Head and Rump. It continues in an irregular line against the sky, when seen from the sea; advancing at certain points into a mountainous cape or receding inland beyond view, to unite with a range called the Bekkeveld Range, then dipping down into the Olivants River and rising again into the Karree Range, runs northward, forming the south-western ranges which bound the Orange River basin on that side. Along the sea-coast are uplands of 200 or 300 feet above the ocean, pierced by various unimportant streams. North of the Orange River we enter Great Namaqua Land, extending north to the Portuguese possessions with a waterless and sandy coast; a mountainous and apparently valueless territory, and with no good harbours; it rises at a considerable distance inland into a plateau, which has an elevation 4,000 feet above the sea; while some higher parts rise into peaks with an altitude of 7,000 and 8,800 feet. North of this land is that of Damara, extending to the Cunene River. All of it, from a distance, presenting a most uninviting aspect—not even a tree to be seen from Cape Frio to a distance south of the Orange. A low terrace along the sea-coast is backed by another slightly higher, and beyond the second rises a third into a mountain altitude.

From the Cunene River northward to the Congo this feature, slightly improved, continues, with nothing approaching to a forest; shrubs isolated, unhealthy-looking trees, dot a long line of reddish-coloured land, of an average height of between 150 and 300 feet, rising inland into a lofty plateau wall, very irregular, deeply indented by gullies, ravines, and chasmic depressions. This sea-coast line of rufous colour takes a bold sweep inland, and runs east about seventy miles, when it begins to rise to a height of about 500 feet. A mile north of it is a parallel line of similar altitude, and between these opposing lines flows the Congo, a deep and fast-flowing river of a deep brown colour. So if you return to the sea to view the river's mouth you find it about seven miles wide, with a current of six knots in the centre, and a depth of 1,312 feet. To your right, as you look up, you see Shark's Point; to your left, or north, you see the Sandy Spit, known as Banana Point, covered from end to end with long, low, white-washed magazines, and four or five white flagstaffs, each with a different flag, indicating the nationality of the traders who own the mass of long low buildings.

We have seen sufficiently from the outside to suspect that Africa generally is a plateau continent of from 1,000 to 4,000 feet above the sea, with a sea-front all around, descending in successive terraces to the sea, or suddenly, as in the neighbourhood of the Cape, or along the Red Sea, and rimmed in the main by an irregular mountain line, with a descent often rapid and deep seaward, and a gentler, easier, descending slope to the river basins inland.

The River Congo has a course of 2,900 miles from the Chibalé range, S.S.E. of Lake Tanganika, to Banana Point, on the south-west coast of Africa. Close to the twelfth parallel of S. latitude, across eighteen degrees of longitude, there runs an elevated ridge of from 6,000 to 9,000 feet high, at one part narrowed into a mountain range, at another expanded into a table-land. This is the dividing line between the Zambezi and Congo basins. Out of the furrows, recesses, and folds of its slopes issue the streams flowing in opposite directions—northward into the Congo, southward into the Zambezi. Near the parallel of 4° N. latitude you must look for the dividing line of the waters of the Bahr-el-Ghazel and Shari, which flow north, and those which flow southward into the Congo. Draw a line north and south about the meridian of 16° E. longitude, from lat. 4° north to lat. 12° south, and a slightly diagonal line from 4° north to 12° south, running from the meridian of 30° east to 32° east, and within this vast, compact area you have the basin of the Congo. Its greatest length is a line drawn from south-east to north-west, 1,400 miles, by 1,200, greatest breadth. The number of English square miles that this area contains is 1,300,000.

How comes such a short-course river as this to send such a volume of water that no other river can excel, except it be the Amazon? Because it is a true equatorial river—like the South American stream. If you take a pair of dividers in hand to measure the length of the Congo on some chart of Africa, you will find its length to be 2,100 miles. Apply the same mode of measurement to the Amazon, you will find it to be only 2,300 miles from its source to the meeting of the salt and fresh waters; apply it to the Mississippi, reported to be 4,400 miles long, and you will discover that from its issue into the Gulf of Mexico to the extreme source of the Missouri it is only 2,400; and if the Nile, which is really the longest river in the world, be measured in the same manner, it will be found to have a length of only 3,000 miles. Mere length of river does not imply largest volume; as, for instance, the Nile has a course of about 1,500 miles through an almost rainless country, which does not supply a single affluent. Its measured volume does not exceed 600,000 cubic feet per second, whereas the Congo could receive three and a half Niles, or the Mississippi and the Nile together would scarcely equal its tribute of water to the ocean.

From the folds of the Chibalé Mountain group, south of the Tanganika Lake, the Congo issues into the hollow of the table land lying between the Tanganika and the eastern extremity of the Mushinga range, and flows westward into an oval depression, and forms a lake called Bangweolo. Myriads of small streams have meanwhile swollen the infant stream into a great river, which bears the native name of Chambezi. At the western extremity of this lake, an arm of it, like an estuary, extends north, whence issues the river under the name of Luapula, similar in width to the Thames at London. For a hundred miles it continues its course northward when it empties into a lake called Mweru, covering a superficial area of 2,100 square miles. Issuing from the northern shore of Mweru, the river now known as the Luwa, enters a rent in the mountain fold of Southern Rua, and descends by a series of falls and rapids into a much lower level, whence, by the numerous accessions it receives, notably from a lacustrine river called the Lualaba, it flows a mighty stream north-north-west, every league of its course receiving tributaries from the east and west. From the right enter the Lofunzo, the Luindi, the Luigi, and the Luclama, which the mountain barrier that encloses on the western side the lake basin of the Tanganika sends westward, and through a gap in this barrier the Tanganika, that has collected over a hundred rivers in its capacious bosom, empties its surplus waters by the Luindi and the Lukuga, into the broad Lualaba.

From the left the chain of lakelets—known as the Kowamba, Kahando, Abimbe, Ziwambo, and Kassali—after gathering from weeping forests and spongy areas, discharge their collected strength into the large and ample river.

Now that we understand the course of the Congo—or Lualaba—it is not difficult to understand the character of its basin, and the cause of the almost unrivalled amplitude of waters discharged by the Congo into the sea. On the south, the east, and the west, the three mountain walls, or barriers of table-land, discharge their numberless streams into a plain-like basin furrowed by the courses of five noble rivers running northward in nearly parallel lines with the Lualaba, draining a level 800 miles broad. After a course varying from 600 to 1,100 miles they issue into the Congo in its transverse flow from east and west. Towards the north a tableland descends gradually into another level 600 miles broad, and 200 miles deep, furrowed by four rivers flowing southerly into the wide river. On the whole, then, we may compare it to a huge meat dish, nearly square, surrounded by a low, broad rim, with corners rounded off. It is as though, in very ancient times—the days of great inland seas—this capacious and ample basin formed a great lake three times greater than the area of the Caspian Sea.

Since that period some volcanic agency, no doubt, cracked and sundered the hilly rim to the west, and the waters flowed through to the Atlantic Ocean, and the even bottom of the lake was exposed, which we see now to be furrowed by the voluminous affluents; Kwa, Mbihé, Ikelemba, Lulungu, Lubiranzi, Lumami, and Kamalondo, flowing from the south to the Congo as it flows westerly.

At Nyangwe, 1,700 miles by river from the sea, and near 1,300 miles from its source, the river is about a mile wide, with a volume of 230,000 cubic feet per second. But lower down it receives the Lowwa, the Biyere, the Lubiranzi, the Lulungu, and the Kwa, which alone swells this volume to a million cubic feet per second.

From Nyangwe it has a northerly course of four degrees of latitude; when reaching the equator it deflects N.N.W. to above 2° N. One degree north of the Equator—so numerous have been the streams and rivers shed by the western versant of its eastern mountain boundary—the Congo widens, disparts into ten or twelve channels, and from shore to shore of the main river it is as much as sixteen miles greatest breadth. With an average width of four or five miles it flows direct west for two degrees, then S.S.W. across two and a half degrees of longitude, when it gathers itself together, and in one united stream, gradually narrowing to a mile in width, in depth from fifty to two hundred feet, flows with a strong current in the centre of about five knots, until it expands again at Stanley Pool, which is eighteen geographical miles in length by fourteen miles greatest width. At the lower extremity of the Pool, 1,147 feet above the sea, the navigability of the Congo ceases. It first precipitates itself with awful force down a five mile slope, a succession of leaping waves, which from crest to crest might be about 300 feet apart; then by a series of mad rapids, separated by short stretches of swift but steady flows, for seventy-seven miles, all of it confined by the towering rock barriers of a deep canôn from 300 to 600 feet below the level of the opposing summits of the cleft land; then for eighty-eight miles tolerably safe to navigation, followed by another sixty miles' rush of a distracted river, with roaring cataracts alternating with noisy rapids, through the deep, rocky heart of the grim and solemn-looking hills, until, finally, the last plunge has been made down the Yellala Falls. A few miles lower down it issues out of the sinuous and rocky gullet a navigable and useful river for 110 miles; flows by factories, and villages, and townships, to be presently vexed by the churning screws of ocean steamers and panting tug-boats.

Seven years ago the character of this basin, and utility of the river, was made known for the first time. The geographical knowledge thus acquired cost about £12,000 in English money, and the lives of 173 men. It was given to the world freely in about 12 numbers of the *Daily Telegraph* and the *New York Herald*, each costing about one penny, and afterwards in book form with maps and pictures illustrating the geography and life of the peoples. Then I came to you, and in this and in similar cities I personally expounded to you the possibilities that might accrue were the prospects held out to you reflected upon intelligently. You rejected the notions, condemned them as altogether crude, and unworthy of acceptance by practical men. An association, headed by the King of the Belgians, invited me to Brussels, and there I was eagerly accepted after many protracted discussions, and it was proposed to me to return to this region, and show what I could do with it, and discover what further could be learned.

And this is what we have acquired of further information. That from the mouth of the Congo a steamer drawing fifteen feet can steam up 110 miles, and opposite to this spot, on both sides of the river, we have built stations; that on the north, or right bank, being the principal; that hence we take a land journey of fifty-two miles, where we have constructed another station. We then take boats, and steam or row up eighty-eight miles to a point opposite which there are stations constructed on each side of the river; we now make a land journey of ninety-five miles, and reach a place lately built, called by us Leopoldville, whence we can steam up 1,060 English miles and that the large affluents enable us to steam a distance of 2,000 miles more, and that by a short road past Stanley Falls we could proceed further up the river 350 miles, and a portage of two miles would give us 650 miles. Another short portage, past the cataracts of one of the main affluents, would give us another navigable length of 1,100 miles. Along the main river we have constructed thirteen stations in the most likely places and amid peaceful tribes, with whom we are on terms of familiar intercourse, and who have welcomed us as brothers. To us the river has become as familiar as the Mississipi is to its navigators. The banks and its peoples are well known. The great basin now lies mentally mapped out; it has lost its mystery, and deprived of its power to awe. To us it is no longer a region of fable and myth, we can guage its powers of productivity and its value; and we are disposed to attract the world to it by connecting the upper river with the lower river by a railway, over which commercial men can travel with their barter goods with ease and safety, which will quite obviate the necessity of looking at it as an inaccessible region and daunting those disposed to enterprise, provided, of course, that no insane jealousy will thwart the project.

If you are wise you will not quarrel with us for entertaining such a project, nor look askant at it, but encourage and rather co-operate with us; for to you, as to others, it appears to me to be fruitful of advantages. We have no concern in it further than to see a region so long neglected brought within the fold of the civilised world. Our satisfaction shall be in witnessing its growth and watching it mature into usefulness. Long have you and I gazed upon that white blank in the old maps; long have we wondered what it contained. And now we are satisfied that the region is of unexampled fertility, watered by mighty rivers, which have their perennial sources in deep, woody recesses on the flanks of the mountain barriers which ring the region round about. We know that wide plains, growing pasture fit for cattle, separate these rivers; infinite spaces, fit for thrifty and industrious colonists, promise reward to those who seek them. The river marges show wide belts of forest; in their deep frondent shade clusters of villages lie nestled, and close by are the prolific gardens and fields, blessing the careless, happy people with a profuse abundance. Here and there, like islets in the rich expanse, rise the grove-clad hills with who knows what store of fossil gum on the surface, and useful minerals in their bosoms. And through all, in easy sinuosities, wind the native foot-wide paths, dipping into dell and dingle; and lovely twilight, anon rising from the cool shade of tropical umbrage into the glare and view of far-reaching plains, where you see on the verge of the horizon the smoke denoting the distant village.

Nor are spacious lakes wanting with their broad expanses lightened by brightest sunshine, and their unfathomed depths of fresh water teaming with edible fish to diversify this extensive prospect of tropic land. Within its confines lie Tanganika, with 9,300 square miles, Bangweolo with 8,800 square miles, Mweru, Kasali, Leopold, Mantumba, Muto Nzige, and two or three others reported to exist but not yet explored; a known area of lake waters approaching 30,000 square miles in extent—which may be increased to over 40,000 square miles after more definite knowledge of them has been obtained. Consider how these may in the coming years be rendered useful to the laden steamboat of commerce, and the swift screw-launch bearing to each shore of their waters the gospel of peaceful intercourse between varicoloured peoples.

I dare say that by this time you will have some notion how I would wish this newly-constituted Society to take up the study of geography; not as a science to be relegated to your sedentary hours, but as a science brimful of interest to you as living men with warm sympathetic hearts, desirous of increasing your fellowship with humanity in general; as a science replete with lessons of practical wisdom; as a science which may best be called the admonitor to commerce; as a science wherein there is nothing barren or sterile to any man with eyes to see and ears to hear; as a science which points with commonest inductions to those fields wherein manly effort is needed, and those paths which commerce ought to follow; as a science which delimits the valuable heritages to which all the sons of Adam are born, and directs willing hearts to profitable labour. It is your duty as children of a foremost nation nourished to ample grandeur by a wise, thoughtful, and earnest ancestry, to know the extent of those toil-worn conquests achieved by your sires, and to know how to prepare the minds of your own descendants to wear their honours nobly, and, if possible, how to add to them. If exploration adds a newer field, a larger extension to your knowledge of the surface of the earth, you should endeavour to devise and study of what further use it is to you and other nations. Avoid the cant of senility, and the babbling of confessed impotence which tells you that you have done enough, that you are by far too rich, that your estates are by far too many already; such talk belongs to a people smitten with paralysis and bedridden with old age. Wherever I look around me in this country I see no signs of that among you. I see you creating new machinery, and building new ships, and laying the foundations of new cities; there is weaving and mining, delving and hammering, going on from morning till night in every corner of the kingdom. You are devoted to affairs of love, and going through the forms of marriage daily, and life is hourly gaining on death everywhere. You are building new schools and moulding young heroes without pause, and prosperity and good fortune seem to have blessed you. Therefore gather yourselves together into Geographical Societies to impart the knowledge of the science wider that it may quicken energy and inspire enterprise. The study of Geography ought to lead to something higher than collecting maps and books of travel and afterwards shelving them as of no further use. I would like to see the maps in men's hands to be studied as generals study them before planning campaigns. I would like to see the manufacturer or merchant study them with the view of planning commercial campaigns, the man of capital pondering over them like men who design constructing a railroad across a country, or a military engineer designing defensive works.

Had your Government followed such advice, as I have given you to-day, some months ago, there had never been a Treaty made to close the Congo basin, and you would never have needed me to tell you how monstrous the Portuguese claims were.

The Royal Geographical Society of London has done excellent work, all will admit; and as soon as an Explorer has brought home, and submitted his budget of geographical facts to it, it has been forward to recognise the value of them without regard to his nationality; it has been a fit centre of effort to pierce the mystery of unknown Africa, and all that we know of the old Continent may be attributed to its influence, and continuous exertions to excite interest in geography. But at this stage of progress it is time that the study of it should be taken up by the large cities which profit by it, in order that it should not only contribute to the natural thirst for knowledge, but that it should bear fruit like other studies.

I do not mean by geography the study of simple topography, the mere knowledge of the delineation of the earth's surface, the relation of one locality to another, or of the difference between one country and another; but having acquired a technical knowledge of these things, I should like to see a direct application of it to the needs of humanity, and this cannot be done until it is more widely diffused than hitherto. I therefore must needs congratulate Manchester that she has been the second city in this kingdom to aspire to possess a Society of Geography, and I hope before many weeks shall elapse to hear that other cities have proceeded to form similar societies.

The Lille Geographical Society offers each year prizes to be competed for in the local schools. Last year the successful candidates (seven in number) were taken to Boulogne-sur-Mer, where they were shown the local industry of the place (pencil and pen making).

NOTE ON THE CONGO FREE STATE.

We are enabled by the kind permission of Messrs. Sampson, Low, Marston, and Co., to use a sketch map to illustrate Mr. Stanley's address, which forms one of the illustrations to the new book* of Mr. Stanley's, shortly to be published by Messrs. Sampson, Low, and Co., the publication of which is looked forward to with much interest.

A few remarks may be useful to those who have not closely followed the work of the Berlin Conference on the Congo.

Mr. Stanley estimates the extent of the Free State of the Congo to be about 900,000 square miles, about 4½ times the extent of France and about 7 times the extent of Great Britain and Ireland. Of this large extent of territory, 600,000 square miles is land of unsurpassed fertility, at present occupied by about 30,000,000 inhabitants. It comprises within its borders about 4,000 statute miles of navigable rivers and 41,000 square miles of lake area.

It is proposed to overcome the difficulties of the falls or cataracts in the lower course of the Congo by making two lengths of railway at a cost of about £500,000. One length of 52 miles from Vivi to Isangila, on the north or right bank of the river, and one of 95 miles from Manyanga, also on the right bank, to a point opposite to Leopoldville, which is on the left bank of the river, or a total of 147 miles.

This railway and the open river navigation for boats, ships, or steamers will enable traders to bring down to the coast such produce as will pay for the cost of carriage and export dues, and leave a profit on the transaction to the trader. Such produce as palm oil, rubber, gums, coffee, copper (already smelted by the natives), ivory, camwood, orchilla weed, palm fibre, hides, ebony, mahogany, lignum vitæ, teak, redwood, sugar, cotton, rice, or wheat. And to send into the country in exchange for these commodities cotton goods, cheap finery, blankets, crockery, muskets, gunpowder, hardware, spirits, &c., &c.

The principal points arising out of the agreement at Berlin, or a part of that agreement, are the appointment of an International Commission to regulate the navigation of the lower Congo and the recognition of the Free State with the following boundaries for freedom of trade:—

1. The trade of all nations shall enjoy complete freedom in all the regions forming the basin of the Congo and its outlets. This basin is bounded by the watersheds (or mountain ridges) of the adjacent basins, namely, in particular those of the Niari, the Ogowé, the Schari, and the Nile on the north; by the eastern

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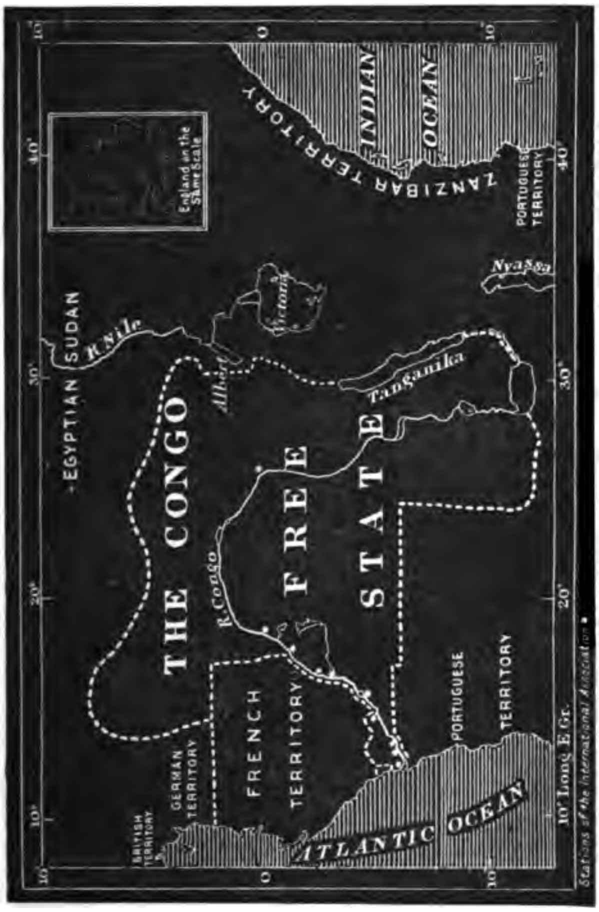
* From "The Congo from the Founding of its Free State," &c., by Mr. Henry M. Stanley.

watersheds line of the affluents of Lake Tanganyika on the east; and by the watersheds of the basins of the Zambesi and the Logé on the south. It therefore comprises all the regions watered by the Congo and its affluents, including Lake Tanganyika, with its eastern tributaries.

2. In the maritime zone, extending along the Atlantic Ocean from the parallel situated in 2° 30′ of south latitude to the mouth of the Logé. The northern boundary will follow the parallel situated in 2° 30′ from the coast to the point where it meets the geographical basin of the Congo, avoiding the basin of the Ogowé, to which the provisions of the present Act do not apply. The southern boundary will follow the course of the Logé to its source, and thence pass eastwards till it joins the geographical basin of the Congo.



SKETCH · MAP OF THE CONGO BASIN.

3. In the zone stretching eastwards from the Congo Basin, as above defined, to the Indian Ocean, from the fifth degree of north latitude to the mouth of the Zambesi in the south, from which point the line of demarcation will ascend the Zambesi to five miles above its confluence with the Shire, and then follow the watershed between the affluents of Lake Nyassa and those of the Zambesi, till at last it reaches the watershed between the waters of the Zambesi and the Congo.

It is expressly recognised that in extending the principle of free trade to this eastern zone the Conference Powers only undertake engagements for themselves, and that in the territories belonging to an independent Sovereign State this principle shall only be applicable in so far as it is approved by such State. But the Powers agree to use their good offices with the Governments established on the African shore of the Indian Ocean for the purpose of obtaining such approval, and in any case of securing the most favourable conditions to the transit (traffic) of all nations.

The extension of the free trade region in Africa, with the consent of the Independent Powers of the East Coast, from the Atlantic to the Indian Ocean. To summarise the agreement itself in a small compass, we may say that it provides—

1. For an International Committee having care of the Congo mouth.

2. It provides that the region shall be free to the flags of all nations. No taxes or administration dues of any kind shall be charged upon imports. Export dues shall be charged only sufficient to compensate for useful and necessary expenditure in the interests of trade. And these shall be levied alike upon every nationality equally with the Free State or Sovereign States. No monopolies or favours of any kind may be instituted by any Power. Foreigners shall enjoy, without distinction, the same rights and treatment as subjects of the State exercising Sovereign rights. All Powers exercising Sovereign rights within the region shall be bound to co-operate in the suppression of slavery, to promote the work of missions, and to protect all travellers in the region. The territories are to be considered neutral territories even in a time of war.

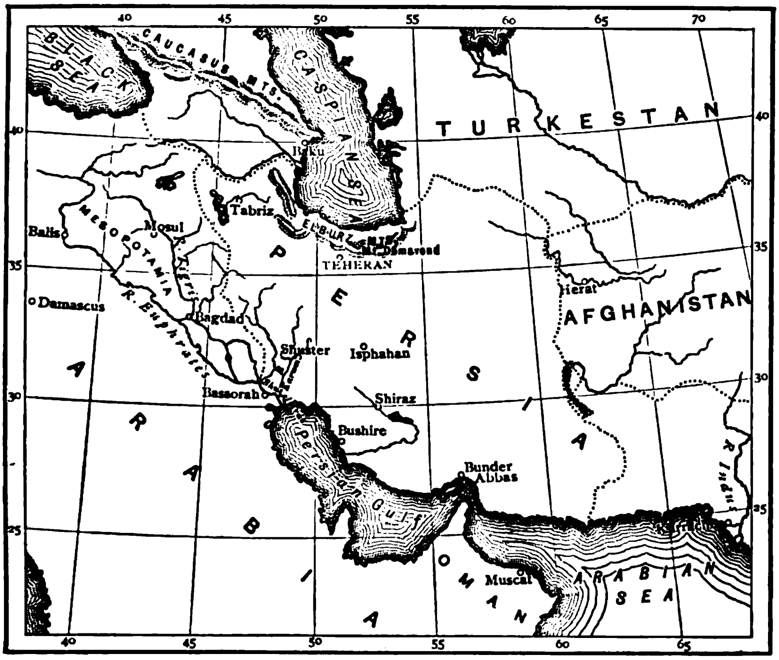
The Brussels Geographical Society publishes a very excellent Map of the Congo, showing the result of the Berlin Conference.

Under the heading of "News from Travellers," the Marseilles Geographical Society gives very interesting accounts of scientific researches all over the world.

OUR COMMERCIAL OPPORTUNITIES IN WESTERN ASIA.

By Mr. ARTHUR ARNOLD, M.P.

[Delivered before the Members of the Society in the Owens College, February 11, 1885.]



SKETCH-MAP OF WESTERN ASIA.

I AM honoured in a high degree and with no small responsibility in being called upon to deliver the first special address to the members of the Manchester Geographical Society. I am sure no one hopes more sincerely than I do that I may be followed by many who have a better title to speak to you upon matters of geography in connection with commerce. But while I make no claim to be regarded as a traveller, and would not venture to aspire to any greater denomination than that of a tourist in Western Asia, I ought to say that I am here to-night not as a politician, but rather because I have passed from north to south of Western Asia because I have visited many of the cities and towns on the map before you.

The scientific points to which I wish especially to call your attention are, first, the general contour of Western Asia, its distribution among certain peoples and empires; and second, the rivers of that part of the continent, and their capacity for navigation. Together with this scientific aspect of the subject, I trust I shall succeed in interesting you in our commercial opportunities. So important do I consider the commercial geography of this region, especially to a great manufacturing and food-importing country, that in two successive sessions I have felt it my duty to delay for a few minutes the proceedings in the House of Commons upon the Indian Budget in order that I might press upon the Government the considerations to which I solicit this evening your most indulgent attention. I do not presume to claim that attention for myself, but because I know from personal observation I am about to show you that which is probably the grossest instance of neglect of our commercial opportunities—a neglect which it is the especial function of such societies as this to remedy by spreading a wider knowledge of the facts of geography.

In the extreme east of our scene there is Afghanistan, with a past and a future vivid with interest, and then come the 600,000 square miles of the empire of Persia. I venture to predict that in years which are not very distant, events will occur in that semi-barbarian empire which will compel the people of this country to study its geography. The Afghans are the Swiss of Asia, and perhaps in the future history of the world, the time, though it may be ages distant, may come in which the resemblance may seem not contradictory, as it does at present, to established ideas. I dare say that 2,000 years ago the people of Switzerland had not a high reputation for industry and peacefulness. The average level of Afghanistan above the sea is much higher than that of Switzerland, and the people have acquired a bad name. There is a saying not uncommon among the more pacific people of Beloochistan which is very suggestive. You know that in British India alone the loss of human life every year from poisonous snakes is nearly 20,000, and of cattle 2,000, and you may imagine the feeling of the people against the deadly cobra. They say, "If you meet an Afghan and a cobra, kill the Afghan." There is much similarity in Persia and Afghanistan. Persian is the polite language of the more distant country. The supreme geographical fact with regard to Persia is that the interior is a high plateau, with an average elevation of nearly 4,000 feet above the sea. Tabriz is the most populous city. Teheran, Ispahan, and Shiraz are separated from each other by mountains which in the lowest passes are about twice the height I have mentioned as that of the average elevation. This physical fact dominates the politics and the commerce of Persia. It renders England powerless in the north of that empire, and Russia powerless in the south. It makes it idle to talk of the construction of a railway from the Caspian Sea to the Persian Gulf. It makes Persia, like Afghanistan, subject to severe cold in winter. At this time of the year the greater part of the interior is covered with snow. I have ridden for twenty-three days in succession between Teheran and Shiraz over snow. Between the mountains there are plains, which might, if the snow water were stored for irrigation, yield perhaps ten times their production, except in those hopeless deserts where there is an excess of natural salts. There are large and small salt deserts in Persia, presenting scenes of almost inconceivable desolation. There is no condition of life less favourable to concord and commerce, none more suitable to the vilest despotism than that in which the Persians dwell, divided by mountains into small populations, each one forming an easy prey to the spoiler in the name of authority, or to the professional robber, who is the rival of Government in the plunder of the population. In some districts the ploughman goes to work with a musket slung at his back, and with a murderous knife in his girdle.

As to the people of Western Asia, I remind you that except in Russian territory they admit and accept slavery. But as geographers we must never entertain those unkind and hasty judgments which are sometimes thoughtlessly uttered against a whole people. I would ask you respectfully to look at the facts of human nature in a way worthy of a modern society. Think, then, I would say, of these peoples as living with very bad security for life and property, as exposed to robbery, to violence, to torture and to cruel death, with no sense whatever of power to unite against their oppressors, and with little knowledge how to improve their condition.

At the present moment our commerce is being driven out from Western Asia, partly, as it seems to me, from want of general knowledge of geography, and I have come to-night to appeal as strongly as I can, through this Society, to the interest and the intelligence of Manchester, not only that this decline may be arrested, but that our commercial interests in Western Asia may be vastly increased. The progress of Russian power and trade in North Persia is slow, but steady and sure. I am not one of those who look upon the reasonable growth of Russian power in Central Asia with jealousy or offence. The Russian railway through the Caucasus to Baku, the Russian monopoly of the Caspian, enable that Government to close, if they please, North Persia against our trade. The Czar controls the Shah by the fact that Tabriz and Teheran lie at the feet of Russia. In the geography of Western Asia it may be well to mention the two highest mountains. Mount Elburz, in the Caucasus, is even higher than Damavand, a silent volcano, which, covered with perpetual snow, towers to a height of 19,260 feet in the landscape near Teheran.

With the little known and wretched port of Bushire the trade of England in 1882 was £600,000. Let your attention pass to the city of Bagdad, as one of the chief points of our survey. That is a river port, the trade of which, even under the most cruel restriction and misgovernment, amounts to £1,000,000, mostly British trade. There is good water communication, with no obstruction whatever except such as the misrule of man has created, between London and Bagdad. A year ago steamers ran direct from London to Bussorah on the Tigris. That regular service has now been abandoned, owing to the harassing restrictions upon the passage. Bagdad is now a miserable city, in a wasted and miserable land of wonderful natural fertility. It might be—it will some day become—a vast emporium and centre of trade and commerce. We have a Consul-General at Bagdad, but he is on the Indian Staff. He is not paid by Parliament. If he were, I would move next session to reduce his salary by one-half, in order to call attention to the fact that we have had no report from Bagdad since 1879. I have reminded the Foreign Office and the India Office of this fact. Both have expressed surprise and dissatisfaction, and I dare say the authorities have "woke up" the Consul. Our interest in the Persian Gulf as a position for commerce has been entirely changed by the opening of the Suez Canal. The sea passage has been shortened by 5,000 miles. There is, perhaps, no part of the world in which British influence is predominant where the consequences of the Suez Canal are equally advantageous. The Turkish post from the Mediterranean by Damascus to Bagdad has to make a circuitous route, and caravans generally take thirty days on the journey. Not only is the water carriage from London or Liverpool to Bagdad direct and very much cheaper, but it is much more expeditious. So much is this found to be the case, that Turkish tobacco grown in the Valley of the Euphrates, which used to pass on camels through Damascus, now passes by steamboats down the Persian Gulf and through the Suez Canal.

On the waters of the Persian Gulf, England exercises supreme power, in the name of the Indian Government, by a force of gunboats constantly engaged in maintaining peace and protecting traffic; England does not own one foot of the shores of the Gulf. On the Arabian side there is at the southern extremity the independent Sultanate of Omán. To that Sultan we pay £8,000 a year in consideration of his private claims of sovereignty over Zanzibar, and we protect his power at sea during his good behaviour. A few years ago two members of his family were arrested on the water by British authority, and carried away to India, where one of them died in exile in 1876. The

British Residents at Bushire and Muscat are responsible for the maritime peace of the Gulf, and if any chief disturbs it, or is guilty of acts of piracy, even in the Red Sea, the British Resident sends a gunboat and exacts a fine or inflicts punishment as he thinks fit. All reports are made to the Bombay Government; they are excessively meagre in their statements, compiled in the most uninviting manner natural to documents not destined for any public circulation, and you will not be surprised when I tell you that the figures for 1882 are the latest which are obtainable at the present time.

Above Omán the shores and islands on the Arabian side belong to the Ottoman Empire. But the power of the Sultan is invisible and unknown until we reach Bussorah, on the deep and broad stream at the head of the Gulf. From Kurrachee, the most northern port of India, to Bussorah, the distance is 1,200 miles, and when England ceases to possess the chief maritime influence at the head of the Persian Gulf, she will be likely also to have lost her hold upon India. If it were not for British power in the Gulf, those waters would be infested with pirate ships and with vessels engaged in the slave traffic from Africa. The chief native industry of the Gulf is pearl diving, performed almost exclusively by slaves, who go down with a rope round their waist and an iron weight attached to the feet. By much practice, and with great suffering, they can remain under water nearly two minutes, but only in the hottest months, when the temperature at midnight on board ship, off Bunder Abbas, is sometimes over 100 degrees.

Now, if I can succeed in interesting you in the geography of this region, the result may be most valuable to civilisation and good government, as well as to our commercial interests. Bushire is the chief port of southern entry for Persia. But it has no harbour for sea-going steamships, and the vessels of the British India Company are compelled, owing to the shallowness of the water, to anchor three miles from the place of landing. Taking Ispahan as one of the centres we desire to approach, the distance from Bushire, passing through Shiraz, is 519 miles. Between Shiraz and Bushire there are 20 or 30 miles of almost unimaginable difficulty. I think myself a fairly good walker, but I could not get over that distance in two days. Perhaps in Europe there is no worse walking than upon the cinders of Vesuvius. But that is smooth compared with the way to Shiraz. Imagine the sides of rocky mountains blown down with dynamite, and that you are invited to pass on horseback for miles over the *débris*, and to get up the rugged, almost precipitous, sides of the cliff, and you will form some notion of the track by which the bales of Manchester goods pass into Persia on the backs of mules. Yet in 1882 cotton goods from Manchester worth £300,000 entered Bushire mostly by that abominable road, where to make a mile an hour is fair work. From Shiraz to Ispahan, 323 miles, the track is good, and a carriage road could be made at no great cost. But to make carriageable the way from Bushire to Shiraz I regard as practically impossible. Because of this difficulty our trade is being steadily driven backward by Russian progress. All the improvements which Persia makes are in the more easy direction of the Caspian Sea, and if you buy foreign goods in the markets of Ispahan, the chances are that they are Russian. If we had a good road they would certainly be English.

I wish you to observe that in all these places—Bagdad, Bushire, Ispahan, we have no officers of commerce, no consuls responsible to England, though the trade of the Persian Gulf is even now more English than Indian. At Ispahan we ought to have an active British vice-consul. At present an Armenian represents the majesty of the Queen-Empress, with no knowledge of this country, and consequently no influence. There is one firm of British merchants in South Persia with their chief place of business at Bushire. The lately resident partner writes to me under date 16th January, 1885: "Our trade in Manchester goods is a thing of the past, and for some years we have not shipped one bale to Persia for 50 we used to send. We suffer from our Government representatives having a lack of vigorous support from home and the weak-kneed manner in which they protect and push our commercial interests. The natural highway into Southern and Central Persia—the Karun river—is not yet allowed to be used, and the resources of Mesopotamia are choked by the Turks still only allowing two English steamers to ply on the river between Bussorah and Bagdad, and those two even not permitted to tow barges." The writer of that letter is Mr. Mackenzie, who is well known at all the places I have mentioned, and who has travelled from Ispahan to Shuster upon the Karun, which is the only navigable river in the whole of the Persian Empire. The place where that river falls into the Persian Gulf, mingled with the streams of the Euphrates and the Tigris, is, as I have shown you, completely under our control, yet we cannot put a ship upon the Karun. Between Mahommerah and Shuster there are rapids in the Karun at Ahwas, where it would be desirable to cut a short canal in order to get vessels quickly up to Shuster. But there is no difficulty in that work; the river is navigable at all seasons. At Shuster English goods would be landed 244 miles nearer to Isaphan than at Bushire. Instead of 519 miles, the goods would be only 275 miles from the central city of Persia. Here, then, is one of the two great objects which we are pursuing this evening. We desire that the navigation of the Karun should be made good, maintained, and opened for free traffic.

The eldest son of the Shah is the actual ruler of all Southern

Persia, including Ispahan. He is a prince of great boldness of character; he has been guilty of acts of terrible cruelty, but I do not think him a bad man. He is not heir to the throne because his mother was not a princess, but I do not expect that upon the death of the Shah he will submit to the supremacy of his younger brother. Not very long ago this prince, the Zil-es-Sultan, ordered the assassination of Hassan Kuli Khan, the local chief of the district between Shuster and Ispahan, who was so favourable to the opening of this new route that he offered to bear a third of the cost of all the steamboats for the Karun, and to furnish 100 mules, or as many as might be needed, for the land transport between Shuster and Ispahan. In proof of sincerity, he proposed then and there to give Mr. Mackenzie the sum which he might estimate as one-third of the requisite capital. I have no doubt that if there were proper energy in our dealings with the Government of Persia the free navigation of this river and the opening of the Shuster-Ispahan route might be accomplished. Cobden said that "an ambassador ought to be the commercial traveller of his government." But in Western Asia nothing is done for commerce, and nothing will be done until the commercial people of England have mastered the geographical facts, and then insist upon action being taken by the Government. That is why I am favourable to relieving India of the cost of these officers and making them servants of the British Crown. I warrant we should soon make a profit of a hundred times their salaries by the change.

In Persia we need a change of policy in our Minister at Teheran; we want free navigation on the Karun; a thorough reform and regulation of the customs system. The Persian customs are now farmed. All power in Persia depends upon how much you are ready to pay for it at Teheran. So much a year for liberty to plunder, harass, and injure the trade in the South under the name of customs. When the bargain is struck the Government will ask for no accounts; the farmer employs his own servants. The system is one of licensed extortion. If we had two or three strong men representing the Power of England and India who knew they were well looked after this would soon be set right. The Prince-Governor of Southern Persia knows that just as the rupee is current upon all his seaboard, so is the power of the Sovereign whose image is upon that coin—one which he is bound to respect. I know his English sympathies; he told me he wished to send his children to be educated here; but he has no knowledge of the world and has never been outside Persia. I should like to place near him in Ispahan a really good and competent man as British vice consul. And now I have done with Persia and pass to the greater matter in which I wish to interest you—that of the free navigation of the Tigris and the Euphrates.

There are many advocates of a railway in the Euphrates Valley. I say nothing against such a project, but my special object this evening is to expose the geographical facts and the opportunities for commerce which Nature has provided. I have no doubt whatever that in the next century the valleys of the Euphrates and Tigris will be the scene of great traffic. At all seasons the Tigris is navigable for nearly 600 miles, and at most seasons for about 900 miles. The Euphrates is obstructed in its lower part by dams and water wheels, but according to the very high authority of Sir Arnold Kemball this grand stream, which at Balis, nearly 1,000 miles from the Persian Gulf, is 300 yards wide, might at very small cost be rendered navigable for steamboats. The two rivers approach very near to each other at Bagdad, where a connecting canal has been constructed. This canal is out of repair; but not many years ago a steamer 120 feet long, with 20 feet beam and drawing 2ft. 8in. of water, was passed through this canal and made the journey up the Euphrates to Balis. There is no difficulty in navigating the Tigris as high as Mosul, and the Euphrates to Balis; that is, opening about 1,500 miles of highway into a most fertile and fruitful country, from all points of which there are roads leading into Western and Central Asia. If these rivers were not blocked by the Turkish Government, a small subsidy of £5,000 a year would probably be sufficient to render certain the success of a commercial undertaking with a regular line of steamers upon those rivers. India now pays a subsidy of £3,000 a year to the Euphrates and Tigris Steamship Company, which is allowed to move two boats under miserable restrictions up and down to Bagdad. The fall in the Euphrates from Balis to the point nearest Bagdad—that is, 355 miles—is 6in. per mile. Steel vessels carrying 60 tons of cargo, with a draught of 2ft. 6in., would perform that journey easily in thirty hours, and could tow after them steel lighters up the stream in sixty hours, which could each carry 200 tons of cargo, with a draught of not more than two feet.

I do not believe that in the whole world there is so great an advantage to be so easily gained as would follow from the opening of these rivers to free navigation. I do not seek it for this country exclusively. I would ask, and if need be I would demand, that the navigation of these rivers should be improved and maintained by an international commission. I have pressed this matter again and again upon the sympathetic attention of the Government. I mean to keep on at it. The gain would be immediate and increasing. The opening of these rivers would bring prosperity to Western Asia, and would certainly in three or four years add millions to the foreign trade of this country, of which the greater part would be in the manufactures of this district. Notwithstanding the enormous development of trade since the opening of the Suez Canal in

1870, the means of carriage on the Tigris are worse now than fifteen years ago. In 1870 the freight upon iron bars from London to Bushire was 67s. 6d. a ton; in 1883 it was 30s. Now it is even less. All this indicates the greatness of the opportunity.

It appears impossible to move the Turkish Government by individual appeals. If that should be so, then I would suggest that it is the duty of the Government to proceed by action like that which has been taken at the instance of Germany with regard to the Congo. You will observe that the junction of the Tigris and the Euphrates occurs about 100 miles from the outfall in the Persian Gulf. The stream in which they flow together is called the Shat-el-Arab, but I am inclined to argue that it is substantially a part of the Tigris, just as much so as the Mersey is the Mersey below the point at which it receives the waters of the Irwell. If that contention were admitted, then the conditions of the problem would be altered, because 50 miles of the east bank of the Shat-el-Arab belong to Persia. This fact might be held by diplomatists sufficient to bring the whole of the Tigris, and probably the Euphrates also, under the principle of the stipulations of Articles 108 and 109 of the Treaty of Vienna of 1815, which are the foundation of all international government and navigation of rivers. The former of these articles stipulates that "the Powers whose States are separated or traversed by the same navigable river agree to regulate by common accord all that relates to the navigation of the river;" and the latter article declares that "the navigation shall be completely free throughout all the course of the rivers referred to from the point at which they become navigable to the mouth, and that such rivers cannot in all that relates to commerce be closed against anyone, it being understood that they conform to the rules of the navigation, which are to be framed in a uniform manner as favourable as possible for the commerce of all nations." Upon the principle of those Articles was formed the Commission which improved and established the navigation of the Danube. It was upon those stipulations that negotiations were based with reference to the Congo. I think it would be reasonable to ask the consent of Turkey and Persia to the formation of such a commission, composed of representatives of all nations interested in the traffic of these great Asian rivers. If they were opened, the route would soon be used for travelling to and from India. From the shore of the Mediterranean to Balis is not more than 130 miles, and from Balis the journey to Kurrachee would be about 2,000 miles of smooth water. From Balis on the Euphrates to Bagdad on the Tigris light steamers would pass easily in two days. Only a small effort is needed to obtain this immense advantage. I do not suggest railways, or tramways, or any matters requiring great fixed capital; only the improvement and the freedom of the natural waterways. This will be done, it must be done, when the English people have grasped the simple geographical facts of the case. The valleys of these rivers are among the most fertile places of the whole earth. This change would in time make that land smile with progress and prosperity—would fill it with a great and industrious population, ready to win by their own products large imports from England. I should not fear to predict that the trade of the Persian Gulf would speedily rise to double and treble the present amount.

It is no proper part of a geographical task that I should speak of the blessings which such intercourse would bring to the native population. Yet they would follow as certainly as will the night which is now upon them, as upon us, give place to the coming day. Hours before the sunrise of to-morrow morning pierces the gloom of our northern winter, its rays will have been shed upon this region of Western Asia, covering with rosy dawn the snow-clad mountains of Persia, glittering upon the waters of the gulf, making the rivers to shine like streams of molten silver for a thousand miles, and casting down shadows of the palm trees in the cool and sweet morning air. The Arabs of the Tigris will tell you that the Garden of Paradise was formed at the juncture of these two great rivers. It is, indeed, a scene of surpassing loveliness, and yet as we look upon it in a moment of fancy and of lingering farewell, do we not all know that a paradise of nature cannot contain the happiest homes of human life until all who dwell therein, from the highest and the most powerful unto the last and lowest, are guided and governed by a perfect sense of duty, which, though it be above our grasp, we are able in the light of religion and of education, and through all that obscures our vision, to recognise with the ennobling hope that it may ever more and more give unto the world the largest measure of peace and happiness.

New Railways in Roumania. — The Minister of Public Works has just presented to the Roumanian Chambers a bill for the completion of several short lines, destined to complete or supplement the existing ones. They are those of Tirgu-Okna to Moïnesti, Pitesti to Curtea, Arschis, Tirgovista to Laculete-Baile-Puciosa, and Piatra to Toscana—altogether 114 kilometres. We learn from the *Curierul Financiar* that the building of these railways will be adjudged in lots; but the Government desires to construct them itself by means of its engineer troops. All the necessary materials as are found in the country will be bought therein. The rest will be bought after offers by at least five foreign manufacturers, to be made direct and without intermediary.

CORRESPONDENCE

AND INTERCHANGE OF PUBLICATIONS WITH SOCIETIES ABROAD.

The following Societies, amongst others, have been communicated with by the Honorary Secretaries, and the Societies have acknowledged the communication, and a large number of them have consented to exchange publications and correspondence.

The Societies marked * have already forwarded their publications, which may be referred to by members of the Society in the Library.

*Société de Géographie Commerciale de Bordeaux.
*Société de Géographie de L'Ain, Bourg.
Société de Géographie de Brest.
*Société Royale Belge de Géographie de Bruxelles.
Société Bourguignonne de Géographie, Dijon.
Union Géographie du Nord de la France, Douai.
*Société de Géographie de Genève.
*Société de Géographie Commerciale du Havre.
*Société de Géographie de Lille.
*Société de Géographie de Lyon.
*Société de Géographie de Marseille.
Société Languedocienne de Géographie, Montpellier.
Société de Géographie de L'Est, Nancy.
Société de Géographie Commerciale de Nantes.
*Société de Géographie et d'Archéologie de la Province d'Oran.
*Société de Géographie de Paris.
*Société de Géographie Commerciale de Paris.
*Société Normande de Géographie, Rouen.
*Société de Géographie de Toulouse.
Verein für Erdkunde, Berlin.
*Africanische Gesellschaft in Deutschland, Berlin.
*Deutscher Colonial Verein, Berlin.
Verein für Erdkunde, Cassel.
Badische Geographische Gesellschaft, Carlsruhe.
Verein für Erdkunde, Darmstadt.
*Verein für Erdkunde, Dresden.
*Verein für Geographie Statistik, Frankfurt.
Verein für Erdkunde, Greifswald.
Verein für Erdkunde, Halle.
Geographische Gesellschaft, Hamburg.
*Geographische Gesellschaft, Hanover.

Geographische Gesellschaft für Thuringen, Jena.
Geographische Gesellschaft, Jena.
Geographische Gesellschaft, Konigsberg.
Geographische Gesellschaft, Lübeck.
Verein fur Erdkunde, Leipzig.
Geographische Gesellschaft, Munich.
Verein für Erdkunde, Metz.
Geographische Gesellschaft, Stettin.
*Wurttembergischer Verein für Handelsgeographie, Stuttgart.

Honorary Member.—Monsieur le Comte F. de Lesseps writes that he is much flattered by his election as an Honorary Member of the Manchester Geographical Society.

The Right Honourable Lord Aberdare, G.C.B., writes as follows:—

Duffryn, Mountain Ash, South Wales, April 11th, 1885.

Dear Sir,—Pray convey to the Council of the Manchester Geographical Society my cordial thanks for the honour they have done me in electing me an honorary member of their Society, which, I hope and believe, will have a brilliant and useful career.—Very faithfully yours,

Mr. Sowerbutts. (Signed) ABERDARE.

REVIEWS.

VICTORIAN YEAR-BOOK FOR 1883-4. *By Henry Heylyn Hayter, C.M.G., Government Statist of Victoria.*

THIS is an admirable compilation of the geography, history, and statistics of the colony. It is illustrated with elaborate tables and a coloured map of the colony. The information is conveyed by chapters on the population, finance, vital statistics, interchange, production, accumulation, law, crime, &c., religious, moral and intellectual progress, and defences. Articles are appended showing the geographical and historical progress of the colony, and a general view of Australian statistics, of the statistics of Fiji (1878 to 1883), and a valuable article is also given on the Australian constitution. The chapter on vital statistics is extremely valuable, not only for the information conveyed as to the colony and Australia, but also as giving a large amount of comparative information of European and British vital statistics. The book is a credit to the colony, is full of interesting information, is admirably digested, and is clearly printed.

ANNUARIO STATISTICO ITALIANO. Anno 1884. *(Ministero di Agricoltura, Industria e Commercio. Direzione Generale della Statistica.) Roma: Botta,* 1884.

THIS solid volume of over 750 pages is a real model, in its beauty of type and general "get-up," as well as its clear and orderly arrangement, of what a statistical digest ought to be. Few countries can be more interesting to foreign readers, in their economical development, than the youngest of the Great Powers; and perhaps not one gives evidence of more rapid or more satisfactory progress both in manufactures and in foreign trade. In the brief space of this notice it is obviously impossible to enter into much detail regarding the vast mass of facts accumulated by the Italian Statistical Department. We shall therefore merely select one or two points that may offer some interest to our readers. The Editor, in his elaborate and valuable introduction (pp. 1–183), enters into an explanation which touches upon the general geography of Europe in a very important degree. Apropos of the question of a revised measurement of the surface of Italy, he refers at length to the recently published measurements of General Strelbitsky (*Superficie de l'Europe,* 1882), which we see are followed by Mr. Chisholm, in Stanford's *Europe* (1885). In a table, comparing Strelbitsky's measurements with those of Wagner, the Editor shows that the three countries in which the difference is greatest are Italy, Sweden, and Norway, as will be seen from the following:—

	Area according to Wagner. Kilometres.	Area according to Strelbitsky. Kilometres.	Absolute difference. Kilometres.	Per cent.
Italy	296,325	288,540	−7,783	2·63
Sweden ...	442,818	450,575	+7,757	1·75
Norway ...	318,195	325,423	+7,228	2·27

Now the wild and inaccessible nature of vast tracts of Scandinavia may easily account for the large discrepancy in the case of those countries. But how to explain the difference of no less than 2·63 per cent for a country like Italy, as against only 0·01 per cent for Germany and Holland, and 0·02 for Switzerland and Belgium? The Editor finds the cause of this remarkable divergence in the inferior character of the Italian maps which Gen. Strelbitsky made use of, none of which, with the exception of those of Sicily (*Carta topograpica,* scale of 1,100,000, on the Avet process) and Sardinia (La Marmora's), are thoroughly reliable. For these reasons he hesitates to accept Strelbitsky's figures definitely. At the same time he announces that the Military Geographical Institute of Florence has undertaken to publish an accurate measurement of the kingdom early in the present year, based on the best cartographical material that is procurable, so that in the next *Annuario* we may hope to meet the new and revised statement of area.

Great Britain holds second rank among the foreign countries trading with Italy—France, of course, standing first. The comparative growth of this trade may be indicated as follows (value being in *millions of lire*):—

IMPORTS.

	Total.	From Great Britain (including Malta and Gibraltar).	From France.
1862	830,029	192,184	233,378
1877	1,156,265	296,521	332,072
		From Great Britain (excluding Malta and Gibraltar).	
1881	1,332,012	361,542	364,807

The rapidity with which, even excluding our Mediterranean possessions, we are overtaking French imports, will not fail to strike the reader.

EXPORTS.

	Total.	To Great Britain (including Malta and Gibraltar).	To France.
1862	577,468	94,828	188,883
1877	953,188	125,693	418,890
		To Great Britain (excluding Malta and Gibraltar).	
1881	1,192,323	82,631	551,719

Here the tables are turned, as our imports from Italy are decreasing (a fall from 96,788 million lire in 1878). Moreover, the total Italian exports have decreased from 1881 to 1882:—

	Million lire.		Million lire.
1881	1,192,323	1882	1,155,833

as we learn from the appendix.

The import of raw cotton is rapidly increasing (from 54 million kilos. in 1881, to 65¼ million kilos. in 1882), and so is the export of cotton yarn. The import of cotton yarns and cloth is greatly decreasing (from 26½ million kilos. in 1881, to 22¼ million kilos. in 1882).

In 1882 the mercantile navigation of Italy, international and coasting combined, stood as follows:—

	Sailing.	Steamers.
No. of vessels (sailed and arrived)	166,876	52,473
Total tonnage of goods borne	4,833,792	4,845,643

In 1881, whilst out of over 9,000 sailing vessels engaged in foreign trade, only 301 carried the English flag, out of the total number of steamers (3,771), no less than 1,526 carried the same flag.

The following shows the total movement (imports and exports) of the six great ports in 1882, including both foreign and coasting trade:—

	Tons.		Tons.
Genoa	2,077,703	Leghorn	533,227
Venice	777,094	Palermo	382,908
Naples	627,814	Messina	354,667

Among the statistics which we regret to find missing in this valuable volume, are those relating to the *growth* of cotton in the kingdom, and also to the recent experiments of tea-growing in Sicily, information concerning which cultures would have been unusually interesting.

PHILIPS' HANDY GENERAL ATLAS OF THE WORLD. *New and enlarged edition. By John Bartholomew, F.R.G.S.*

THIS is a very handy and, in a small compass, admirable atlas. The maps are fairly brought up to the present time, are well executed and are pleasant to refer to. The special maps, showing the extent of the British empire, the commercial map of the world, and the Atlantic basin, are especially valuable. It has a new index of 40,000 names geographically placed, and is altogether a very satisfactory hand atlas.

LITERARY NOTES.

The *Deutsche Colonialverein* announces in the first April number of its periodical the removal of its head offices from Francfort to Berlin. The following important resolution was passed at the second general meeting of this society: "The Committee is authorised to establish an office for the purpose of supplying information regarding the condition of transatlantic countries." The object of this resolution is chiefly to make would-be emigrants more acquainted with the conditions of their future homes, and thus minimise the deplorable results of planless emigration.

The Mittheilungen der Africanischen Gesellschaft in Deutschland at Berlin have just published Vol. IV., No. 4. It contains extracts of the journal (mostly written during his lengthened stay at Mukenge) of the lamented traveller, Dr. Paul Pogge, and also his hitherto unpublished description of the discovery of the confluence of the Lulua with the Kassai or Sari river. Though necessarily incomplete and fragmentary, this journal has been most ably compiled by A. von Dankelmann, and throws much light on the Baluba country and its people. The Society further publishes in this volume the first reports of their Schulze Expedition, whose object is to continue the discoveries of the southern tributaries of the Congo. The expedition intends to travel via Nokki and San Salvador, and strike across the Quango river to Mukenge.

German Colonial Literature.—The recent colonial acquisitions of Germany have caused an important development of literature relating to colonial matters, many of which are well worthy of the notice of our readers. An interesting work by Hermann Roskoschny, entitled *Europas Kolonien,* is being brought out in parts by Messrs. Gressner and Schramm, of Leipzig. Eleven parts have already appeared, at a price of six pfennigs each, dealing with recent West African acquisitions up to Senegal and Cameroons. The following colonial maps have just been issued by the well-known firm of Justus Perthes, of Gotha: (1) Special map of Damara-land, by B. Hasenstein. (2) Map of German possessions in West Polynesia, by the same. (3) General map of German colonial possessions, etc., with twelve supplementary maps, viz., the Gold Coast, Cameroons, Lüderitz-land, S.W. Coast of Africa, Santa Lucia Bay, Samoa and Tonga Islands, New Hanover, Gazelle Islands, and Jaluit, by Dr. Hermann Berghaus. The maps are admirably executed, and the peculiar clicks of the Hottentot names are indicated by special typographical signs. (4) General view of European possessions, on Mercator's Projection (78 × 56 centm.), a map of considerable interest. Lastly, Messrs. Gebhardt and Wilisch are publishing, under the title of *Deutsche Kolonialpolitik,* a collection of official documents and other pieces of useful information regarding recent German acquisitions in Africa, the South Pacific, and other parts of the world. Two volumes of this work have already appeared.

REPORTS OF MEETINGS, SESSION 1884-5.

PRELIMINARY MEETING,

At the Free Trade Hall, on the invitation of the President, Honorary Secretary, and Directors of the Manchester Athenæum, October 21st, 1884. Mr. John Slagg, M.P., (Hon. Secretary of the Manchester Athenæum), in the chair. A paper was read by Mr. H. M. Stanley (*vide ante,* pp. 6-25) on "Central Africa and the Congo Basin; or, the Importance of the Scientific Study of Geography."

FIRST MEETING,

In the Lecture Hall of the Manchester Athenæum, January 27th, 1885, at 7-30 p.m. Mr. J. F. Hutton, J.P., President of the Manchester Chamber of Commerce, in the chair.

The Chairman delivered his inaugural address (*vide ante,* pp. 1-6).

A short report of the Provisional Committee was read, detailing the steps taken and the progress made towards founding the Society, and presenting the rules as prepared by the Provisional Committee for adoption at this meeting.*

The Right Rev. the Bishop of Salford moved, and Mr. Jacob Bright, M.P. seconded the first resolution, viz., "That the report now read be approved, and that the rules submitted by the Provisional Committee be adopted."

The BISHOP OF SALFORD explained that under the rules meetings would be held, books of reference would be collected, and it was intended in the course of time to publish a periodical which should contain the results of geographical discovery within the most recent times. Still some persons might say, What do you expect will be the outcome of this Manchester Geographical Society? Some believe the Society will succeed in spreading a knowledge of geography, and there certainly was need of something or somebody to enlighten the ignorance of many even educated persons on the subject of geography. The other day he was talking to a gentleman upon a question connected with Central America, and he happened to mention Costa Rica. The gentleman to whom he was speaking said, "I believe that place is on the West Coast of Africa." Being told it was not on that coast he said, "Oh, no; it is among the islands of the Pacific." Now that gentleman was educated, but it was evident he had not made geography his special study. There was no doubt that the establishment of a Manchester Geographical Society would promote a study of geography among a large portion of the population. Others would say that it would have great effect on the interests of trade and commerce. No doubt a society like that must directly or indirectly minister to the great commercial interests which all persons in this country had at heart, for it was impossible to contemplate the enormous accumulation of wealth which is stored up in machinery, the immense riches which had been expended in the houses of industry—those great palaces which covered this part of the country—and it was impossible to think of the hundreds of thousands of hands upon whose wages the welfare, comfort, and happiness of millions of men, women, and children depended without feeling the greatest possible anxiety for the continuance of that labour and of that profitable expenditure of capital which new markets must bring to this country. The Manchester Geographical Society would bring to the knowledge of many manufacturers and merchants information of the most recent kind—information which would be obtained not merely directly from explorers and missionaries in various countries, but which would be gathered from all the geographical societies of Europe, and from the published official reports of consular agents to their respective governments. Facts of a specially interesting kind to Manchester people would be published in a small periodical, and that which the parent of all geographical societies—the Royal Geographical Society of London—was not able to do would be done in Manchester for the special interests of Lancashire and the manufacturing districts. But far beyond the promotion of science or even the promotion of commerce was another consideration which must commend itself to their hearts. We all belonged to a great human family, and we could not but recognise with pain the fact that the immense majority of the human family is living in a state of utter darkness, in the deepest moral degradation, without any knowledge of civilization or of Christianity, and without even a desire to come out of their Slough of Despond. But even among the highly educated there was very slender knowledge of the conditions of life under which hundreds of millions of our brothers and sisters were living in distant lands. The highest and the noblest object which that Society could accomplish would no doubt be this—that it would quicken the human sympathies in our hearts towards our neglected and degraded brothers and sisters in far off lands, and lead us to reach out a hand to lift them out of the dark night in which their existence had been shrouded for so many centuries. That Society would, he trusted, be like an electric battery, from which the electric fluid of human sympathy would be sent by gentle and pleasant shocks through the minds and hearts of the generous and intelligent people of Manchester and the neighbourhood. Being themselves enlightened by knowledge, and moved by compassion, he had no doubt they would put their hands to the work which was committed to those who were civilized, to those who possessed the great truths of Christianity, the work of regenerating those races who seemed to be entirely dependent upon us. In this way the Manchester Geographical Society would undoubtedly achieve a greater work than the spread of science or the promotion of commerce. For nothing could be nobler or greater than to raise, civilise, and Christianise the millions of our brothers and sisters who are now practically unknown and abandoned by us in their deepest need.

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* All the persons whose names were entered on the Register of the Society at the date of the First Meeting were taken to be the first members.

Mr. Jacob Bright, in seconding the resolution, said: Mr. Hutton, in his opening remarks, expressed surprise that up to this time there should only be one geographical society in the United Kingdom. I think on reflection everybody would have a feeling of surprise that that should be the state of things. He told us that in several Continental countries there were many geographical societies. That contrast seems to me somewhat strange. The Continental countries for the most part have very few or no possessions away from home. We, on the other hand, inhabit a country which has a vast Empire, stretching to every part of the globe. It would seem that curiosity, if not duty, would have led us to establish the best means for the study of geography. I am not sure that the public men of this country, I am not sure that the members of the House of Commons, are remarkable for knowledge of geography. But if we should come to have flourishing geographical societies, and therefore a great many students in Lancashire and elsewhere of geography, you may rely upon it that public men would have to pay much more attention to this important branch of education. I would not say even that editors of newspapers and writers for the daily press might not be somewhat better informed with regard to geography than they are. I would not for a moment imagine—I could not—that the newspapers of Manchester require any more instruction than they have already obtained; but I remember a time when every editor and every newspaper writer in London would have sworn that the direct route from London to Calcutta went through Constantinople. It was owing to views of that sort probably that Lord Salisbury on one occasion recommended that people should study geography from large maps, in order that they might have a better idea of distances and that they might be more correctly informed with regard to the possible influences of one place upon another. Just now it seems to me to be extremely suitable that we should be establishing a geographical society, for I doubt if there was ever a time when so many of us felt so ignorant of geography. In the midst of the universal scramble of the nations for the possession of distant islands and barren coasts and unhealthy regions, I have found it difficult to know much about many of the coveted places, and probably a great many of those whom I now address have found it equally difficult. I have spoken of the extent of the Empire; but our commerce is wider than our Empire. There is probably no known place on the surface of the globe where articles of merchandise could not be found which have either been produced in Manchester or have come through Manchester; and it would be to me inconceivable that the merchants and traders of Manchester should not back the effort which is being made to establish this society. I have met now and then with a man who had a notion that a geographical society meant an institution where you could see a number of good maps, and had no idea that anything else could come of it. From what the Honorary Secretary has stated to-night you will have gathered that the nucleus of a library has already been formed, and, if this society should flourish, in a few years there will in all probability be a library from which merchants and manufacturers may not only get a more accurate knowledge of the natural features of every country, but may know more of the population and the products of various countries. Then in Lancashire there are thousands of homes from which men have gone to distant parts of the world. Some have gone for permanent residence, many have gone on temporary errands of business. I think it would be a desirable thing, a very happy thing, that we should have an institution where we could go and get the latest and best knowledge that exists with regard to all those distant places. It would be used often by men intending to emigrate, and unfortunately as population increases this small island does not hold the whole people. As the Bishop of Salford has said, commercial objects, objects of private or commercial advantage, are not the only reasons for the establishment of this society. Whatever tends to enrich the intellectual life of Manchester ought to have our earnest support, and nobody can doubt that a geographical society would have that tendency. Lord Aberdare, when he comes to speak to us, will give us an interesting description of the Geographical Society of London. They have frequent meetings, most interesting papers are read, travellers and men with great knowledge of distant countries attend these meetings. If this society should flourish it will be the same in Manchester. You will have eminent men, men distinguished for knowledge of various kinds, willing and happy to come here, and we shall have evenings of intellectual enjoyment, evenings of mental profit, which I think all of us would be very happy to have some share in. The society cannot be a powerful and flourishing society unless it gets a great amount of support, and I hope this support will be freely given. There may be many men who feel that to them the society will be very little use. But these men should consider that it will be of use to the community to which they belong, and in the interest of the public they ought to give it their support. The Honorary Secretary has placed in my hands a paper in which he says: "We have some lady members and we want more. It will be very necessary to have them on the Council and to take part in the teaching of geography in regard to kindergarten teaching." I am very glad that ladies are admitted just as men are admitted, and that no distinction whatever is made. It will lead to the strengthening of the society, and I do not doubt for a moment that we shall have their hearty support. I second the resolution, expressing the hope that in a very short time there will be a great accession of subscribers.

The second resolution was moved by The Right Hon. Lord Aberdare, G.C.B., President of the Royal Geographical Society, seconded by Professor W. Boyd-Dawkins, M.A., F.R.S.; and supported by Mr. Arthur Arnold, M.P., and Mr. Frederic Holmwood, H. M. Consul at Zanzibar—"That the establishment of the Manchester Geographical Society will very largely aid in the advancement of Science, Commerce, and Civilization, and the Society is deserving of the hearty support of the people of Lancashire, Cheshire, and adjoining districts."

Lord **Aberdare** said he need not say that it was in his individual capacity that he appeared there that evening, interested though he was, in common he hoped with every educated man in the Empire, in the progress of geography, and interested as he was in the fame and progress of Manchester — a city that had done such great things for this Empire. He appeared before them as President of the Royal Geographical Society of London—and he had been asked by the Council of that Society to express to them hearty sympathy with their efforts, and the hope that those efforts might be crowned with success. He was sure it could never have entered into the mind of anybody that the Royal Geographical Society could have felt any dissatisfaction at the spread of geographical societies in this country, or that they should wish to keep to themselves a monopoly of such work. On the contrary, they had always felt some astonishment and some mortification that whereas, as Mr. Hutton had stated, the establishment of great societies at Berlin and Paris had been followed by the formation of a large number of societies throughout the provinces, the same had not been the case in this country. He could not but think that the simultaneous foundation of societies at Edinburgh and Manchester was a proof that this country was waking up at last to a sense of the necessity of a diffusion of geographical knowledge. The Royal Society of London was founded 55 years ago, its objects being the promotion and diffusion of geographical knowledge; and he thought it would be admitted by all, and especially by those who were best acquainted with the subject, that in the promotion of geographical knowledge, the Royal Society had met with a very considerable share of success. Mr. Hutton had said with perfect truth that our increase of knowledge within the last half century had been marvellous, and it could be said, with the strictest regard for truth, that the great portion of it was due to the efforts of the Royal Society. They had sent out many expeditions at their own cost, and they had collected an enormous mass of information. The Society had also taken the utmost pains to train geographers.[*] In this country the Manchester Society was the first that had been formed since

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[*] The following extracts from a memorial in favour of founding Chairs of Geography, presented by the Royal Geographical Society to Universities Commissioners in 1879, are very significant: "In conclusion the Council would strongly urge that there is no country that can less afford to dispense with geographical knowledge than England. . . The interests of England are as wide as the world. Her colonies, her commerce, her emigrations, her wars, her missionaries, and her scientific explorers bring her into contact with all parts of the globe, and it is therefore a matter of imperial importance that no reasonable means should be neglected of training her youth in sound geographical knowledge."

1830, the year in which the Royal was instituted. In Germany no less than seven professorships had been endowed for the special teaching of geography, and in France there were also seven professors paid by the State for this purpose. We had nothing of that kind in this country. Did this not seem strange? Might it not be thought that we, of all countries most needing such instruction, would have provided ourselves with the amplest means of acquiring geographical knowledge? What would the position of England be but for her great colonial empire? He saw in an admirable paper read the other day to the Statistical Society that for every square mile in Great Britain and Ireland we had 66 square miles abroad. France had something short of two miles of colonies for every home mile; while Spain had less than one. And yet we with this enormous colonial empire, which occupied one-fifth of the whole globe, had not taken the necessary means of acquainting ourselves with its situation and products. It was in one respect a most animating thought, the position England occupied in the world. Our colonial empire covered eight million square miles—four times more than the colonial possessions of the rest of the world put together. One fourth of the population of the globe was under the rule of the British Sovereign. But while this was an animating thought, there were those who considered that the virtues of the English people were not sufficiently rewarded by our present possessions, and that instead of having 66 miles of colonial empire for every home mile we should have at least 100 miles. He was not at all surprised that that was not the opinion of other countries, and that a stir was at last being made among the Great Powers of Europe to get possession of those portions of the world not yet appropriated, and to found colonies, to which they attributed so much of the greatness of England. It was difficult to exaggerate the amount of ignorance that prevailed with respect to geographical knowledge, and he dared say that if we could look into the records of our Foreign and Colonial Offices we should find many an irretrievable blunder made for the want of such knowledge. Geography was looked upon as a very small part of the necessary studies in this country. He had an illustration of this in a complaint made to him by a young gentleman, who had failed in an examination for a cadetship because he had been asked such an extraordinary question as where Lima was. Even among diplomats there was a great want of geographical knowledge, as was shown by a story told to him by the late Lord Ampthill that a statement he made in joke to some diplomatic people at Berlin that England annexed the Transvaal for the purpose of bringing us nearer to Egypt was received without any question. The country which beyond all question was in advance of us in geographical knowledge was Germany. Not only were the German geographical societies flourishing, but there were in that country three geographical journals, which were read with great interest. It was also a significant fact that on more than one occasion when England wished to have an exhaustive inquiry made into the resources of a country they had employed German travellers. Germany had no colonies, and in her first attempts to possess herself of such had seized three hundred miles of sea coast, the first twenty or thirty miles of which consisted of movable sand heaps, backed by one of the most barren countries in Africa, and which in its turn was backed by one of the most dangerous deserts in the world. It might be said if that was the result of the study of geography by the Germans it was of no use spending one's time in acquiring geographical knowledge. He remembered reading somewhere that when people suffered very much from the pangs of hunger they could be relieved by swallowing a small pill of mud. The gastric juices were occupied by the pill, and though the human frame was not strengthened and refreshed by that means still the pangs of hunger were assuaged. Now he thought that Angra Pequena had been offered to the German people very much in the same way. The acquisitions which the Germans had made had satisfied the immediate pangs of hunger, but they had added nothing whatever to the national strength. However, the Germans were a very intelligent people, and he had no doubt that having once started upon that career they would at once extend their geographical knowledge and add very materially to our knowledge of the globe. He had said that the primary object of that Society was commerce. Still no matter what it was, we should get the same addition to our scientific knowledge. For a long time nearly all the additions made to our knowledge of the globe were the result of the efforts of England to extend her commerce. He would undertake to say that there was not one of those efforts which did not add immensely to our scientific knowledge and strengthen the power of the Empire. But more than that followed, for the spirit of national ardour was evoked and the foundation was laid of that great naval power and that enormous extension of our commercial navy which was, perhaps, the most astonishing circumstance in this modern world. The Chairman had said that one of the main objects which Englishmen ought to have in view should be the discovery of new markets. Well, we were busily engaged in doing that now, for it was a condition of England's greatness that England should not fall back, but should constantly advance. There were people who thought there were no new discoveries to be made. The answer to that was best given by pointing to what had been done by the young Scotchman to whom Mr. Hutton had referred—Mr. Joseph Thomson. He could not doubt that the people residing in this neighbourhood would support the Manchester Geographical Society in earnest. By doing so they would have the opportunity of seeing every interesting person who presented himself, and it was a thousand times more interesting to hear from the lips of a distinguished traveller his own story than to read it. That would be their privilege if only they gave to the Society the importance which it ought to derive from its connection with Lancashire and Cheshire.

Professor BOYD DAWKINS thought the great majority of those present would recognise the opportuneness of the establishment of a Geographical Society in Manchester. At the present time we were heavily weighted in the race for commercial and political supremacy by the neglect of the study of geography, which is almost universal. He knew no better way of encouraging in this district the study of the present surface of the earth than by founding in Manchester a Geographical Society, which should not only collect and record original observations of travellers, but place geography in its proper position in the system of education.

Mr. ARTHUR ARNOLD, M.P., in supporting the resolution, said his welcome to that interesting meeting was, he understood, because he brought to it a representation from Salford. This was the first time in his connection with that borough that he had addressed a public meeting in Manchester. He had declined every invitation from a fear that he might be tedious if he were to talk on both sides of the Irwell. He thought, however, they would kindly perceive that in the cause of geography he could not refuse to cross a river. He had made the passage of that stream to-day as became an ordinary member of a commercial Geographical Society, and he thought if he had the honour of addressing a few words to them that evening, he would suggest that geography, like charity, began at home. Commercial geography differed from scientific geography in that it was based upon the measure of our own wants and their relation to the wants of the people of other countries. It included scientific geography, such as Lord Aberdare's illustrious Society taught in London. It was in a sense more interesting, because it was limited to the affairs of the human family. If there were a land which could not support human life, which could not produce or offer anything useful to human existence, anything calculated to adorn or to give pleasure to human society, anything necessary to human or national security, then as commercial geographers, that was no land with which they had any concern. The pure light of science might be turned upon it, and to science it would belong. Their business was commerce with geography, and for commerce there must be reciprocity, or the promise of reciprocity of life and interest.

Commercial geography looked out from home, over the sea, over the mountains, over the plains, over all the earth, but fixed its attention only where there were other homes or where human habitations could be planted. It was geography warmed with human affairs, it was geography which was concerned with the family business of the whole human race; it was perhaps the most beneficent, the most peace-assuring, the most useful study for an intelligent and a commercial people. How cold and lifeless used to be the teaching of geography in their schools! He remembered a horrid book which was put into his hands as a boy, from which he was supposed to learn geography. The capes of Africa were strung together in a paragraph, which they learned by rote. His memory retained them still, but it was not until years after he learnt them that he understood what was meant by those points of land. It was more delightful to him to walk in the docks of London and Liverpool and to take lessons in commercial geography from the strange ships and the stranger cargoes. He was very enthusiastic as to the purpose of such a society as that which they had formed, and which he trusted might flourish. He would say he did not think it possible for them to engage in foreign aims of more advantage. All human purposes were liable to be thwarted, to be misled, to be misused, but theirs, surely, the least of all. Commercial geography must mean the brotherhood of mankind, the common enjoyment of the earth. It must abhor fetters, the slavery of mankind and the enslavement of trade. It must love freedom and pursue it; freedom of labour, freedom of trade, freedom of navigation. If it beheld a river, one of those grand and silent highways of Nature, obstructed by some geological accident or by the ignorance, the rapacity, or the barbarism of man, it sought to open the stream to the passage of commerce. It strove to raise the standard of comfort all the world over, to substitute for the reign of cruel and barbarous passions the rule of law and the reward of labour. He had seen in some strange lands the wistful eyes of children of the sun fixed with intense desire upon some of the well-designed patterns with which Manchester merchants knew so well how to tempt every nation. Manchester manufactured these goods expressly for certain markets of Africa, Asia, or America. He remembered once seeing a Manchester print made for Mexico with a pattern which it was supposed would sell in no other part of the world. He had so much enthusiam as to trade that he thought he should have enjoyed the business of a merchant. As it was he could pretend to no practical knowledge, but he would say he had sometimes thought that some of those patterns which were sold only under tropical skies would prove very attractive at home. They sent out those and other goods directed by commercial geography, and to win them the man who had hitherto been perhaps little better than a beast of prey would grow coffee or spices or dates or cocoa-nuts, would produce silk or cotton, to reward their enterprise. They might not themselves want those articles, but if not, some of their countrymen required them, and so commercial geography rendered the earth fruitful. The study to which that Society devoted itself was young, though among sciences Geography was one of the most ancient. There were peculiar and even pressing reasons why in the present condition of the world that study should now be most useful. It seemed that the main business of nations to-day was that of pursuing their individual interests in the light of commercial geography. We were taught geography in a very vivid way unknown to our forefathers. Our daily newspapers had become atlases for the people. They gave us maps of Tonquin, maps of the Congo, maps of the Nile. The names of most remote places of the earth became familiar to us as household words. That was a present phase of the world's life, destined perhaps to much activity and continuance in years that were nigh at hand, but also, as we might hope, ultimately to give place to a policy less selfish and more correctly based upon the true spirit of commercial geography. Their object in that Society was not, and never, he trusted, would be, exclusively that of their own advantage. Above all, and beyond all other motives, with perhaps a better right and title than that of any other society, the Commercial Geographical Society of Manchester was an association to promote unrestricted trade. And that, what was it? He replied in the words of Richard Cobden: "Why, breaking down the barriers that separate nations, the barriers behind which nestle the feelings of pride, revenge, hatred, and jealousy which every now and then burst their bonds and deluge whole countries with blood; those feelings which nourish the poison of war and conquest, which assert that without conquest there can be no trade." It is because I think I have a full appreciation of the moral bearing of this question that I invite you all to take part in it.

Mr. Frederic Holmwood, Her Britannic Majesty's Consul at Zanzibar, in supporting the motion said he most fully sympathised with the disappointment caused by the unavoidable absence of Mr. Thomson from the meeting. His recent successful exploration in Eastern tropical Africa bore in an especial manner upon the objects of the Society they had met to inaugurate, and the interest which would have attached to a personal account of his discoveries must necessarily be wanting under present circumstances. He would detain the audience but a few minutes in briefly referring to Mr. Thomson's recent work and its practical bearing on the present movement in favour of geographical research. It was scarcely necessary to remark that, geographically speaking, Africa afforded at present more scope for the explorer than any other portion of the globe, and looking at the movement now going on with daily increasing force throughout Europe, it would seem that the Dark Continent was likely to offer also the best field for future commercial enterprise. It was probably some such conviction that had recently aroused the commercial instincts of the great manufacturing centres of Great Britain in regard to Africa, and he took it that the present meeting was but one form of giving expression to the same feeling. From a purely geographical point of view the various untried fields for exploration might be of nearly equal interest, but when commercial development came to be an important feature in connection with exploration the case is very different, for here everything depended on a judicious selection of fields where discoveries were likely to be speedily utilised. For this last reason he was glad of the opportunity of urging the importance of the vast district between the Victoria Lake and the east coast of Africa, the southern half of which Mr. Thomson had so recently surveyed for the Royal Geographical Society. During a twelve years' residence in the Zanzibar dominions which immediately border its eastern limits, he had become convinced that that was a region offering peculiar advantages to our commerce, and advantages, moreover, that might be secured without involving any serious addition to our responsibilities. The country referred to had its southern limits at the lofty mountain of Kilimanjaro, situated only 140 miles from two safe harbours on the Zanzibar coast, both of which are within a few hours of Zanzibar itself, which for a century has been the great emporium and centre of East African trade. Mr. Thomson describes this region generally as a vast upland plateau with an elevation of from 4,000 to 9,000 feet above the sea level; he considers it richer in ivory, and probably also in mineral wealth, than any other portion of eastern tropical Africa. It is well irrigated by nature and adapted for the cultivation of wheat, cinchona, tea, cocoa, coffee, and other valuable products. Above all it is healthy, and would seem to be the one spot in tropical Africa suited for a sanitorium and permanent settlement of Europeans. The northern portion of this region is still unexplored; it stretches away towards the confines of Abyssinia, and appears, if we may trust the information derived from native sources, to be very similar in its general features to that Mr. Thomson describes, and we know that in remote times some of the most important trade routes in Africa penetrated the continent in this direction. In short, the information we now possess should force these African highlands on the notice of all who are alive to the necessity for seeking new outlets for our surplus population and new markets for our manufactures. There is, however, one serious drawback that the explorer of this region and those who follow in his wake will have to contend with. Amid those healthy uplands are vast tracts of pasture, the grazing lands of innumerable herds of cattle belonging to the various tribes of the fierce Masai nation, whose intractable aversion to the settlement or even passage of strangers among them has until quite recently closed the country even to the adventurous leaders of the Arab caravans. Exploration, therefore, in this direction will involve an expedition on a far more extensive and costly scale than would be necessary elsewhere, and schemes for utilising any opening which may be afforded for the development of our commerce will require united efforts and the combined support of our commercial classes, for mere local undertakings seeking petty monopolies will here never command success. As already mentioned, all the communications with this district must be through the dominions of Zanzibar, with the ruler of which country we have treaties which make the country as free to commerce as though it were situated in Great Britain; and it is no exaggeration to say that in addition to these facilities we have special advantages which are possessed in no other quarter of the world, and which can never be withdrawn from us so long as Zanzibar remains an independent State. It was because he was convinced that the inauguration of that and kindred societies in this country would be the means of enlightening public opinion, and that the result would be that the nation would look forward to the future and not further neglect its interests abroad that he was so glad to do the little he could to advocate its claims to support.

The third resolution, appointing the officers and Council of the Society, was moved by Mr. Henry Lee, M.P., and seconded by the Rev. S. A. Steinthal—"That the following noblemen and gentlemen be appointed the officers and Council of the Society for the current year":—

THE OFFICERS AND COUNCIL OF THE MANCHESTER GEOGRAPHICAL SOCIETY FOR 1885.

PRESIDENT.

His Grace the DUKE OF DEVONSHIRE, K.G., Chancellor of the Victoria University.*

VICE-PRESIDENTS.

The Right Rev. the Lord Bishop of Manchester.
The Right Rev. the Lord Bishop of Salford.
The Right Hon. Lord Egerton of Tatton.
The Right Hon. Lord Winmarleigh.
The Vice-Chancellor of the Victoria University.
The Very Rev. the Dean of Manchester.
Mr. B. Armitage, M.P.
Mr. A. Arnold, M.P.
Mr. Jacob Bright, M.P.
Mr. J. K. Cross, M.P.
Mr. F. W. Grafton, M.P.
Mr. W. H. Houldsworth, M.P.
Mr. Henry Lee, M.P.
Mr. John Slagg, M.P.
The Mayor of Manchester.
Sir J. C. Lee, Knight, J.P.
The Very Rev. Monsignor Gadd.
Mr. Oliver Heywood, J.P.
Mr. Samuel Ogden, J.P.
Mr. H. M. Steinthal.

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* His Grace was elected at the February meeting.

TRUSTEES.

Mr. Alderman C. Makinson, J.P. (Mayor of Salford).
Mr. Councillor P. Goldschmidt, J.P.
Mr. James Jardine, J.P.

HONORARY SECRETARIES.

Mr. A. R. Gallé. Mr. F. Zimmern.

TREASURER.

Mr. T. R. Wilkinson.

COUNCIL.

Mr. H. M. Steinthal, Chairman.
Mr. J. F. Hutton, J.P., Vice-Chairman.

Professor Sir Henry E. Roscoe, LL.D., F.R.S.
Professor W. Boyd-Dawkins, M.A., F.R.S.
Professor T. H. Core, M.A.
Professor A. Hopkinson, M.A., B.C.L.
Professor A. W. Ward, Litt. D.
The Rev. Canon R. Holgate Brown, M.A.
The Rev. L. C. Casartelli, M.A., Ph.D.
Mr. V. K. Armitage, M.A., J.P.
Mr. E. J. Broadfield, B.A.
Mr. S. Dill, M.A.
Mr. Elijah Helm.
Mr. J. Thewlis Johnson.
Mr. George Lord.
Mr. W. Mather, J.P.
Mr. Alfred Neild.
Mr. Henry Newall, J.P.
Mr. J. H. Nodal.
Mr. H. J. Roby, M.A.
Mr. Henry Samson, J.P.
Mr. Mark Stirrup, F.G.S.

* Mr. Eli Sowerbutts, Secretary.

Mr. J. F. Hutton, J.P. (chairman), moved, and Mr. H. M. Steinthal seconded, the next resolution—"That H.M. the King of the Belgians, K.G.; The Right Hon. Lord Aberdare, G.C.B.; Signor Luigi Bodio, Rome; Mr. Frederic Holmwood, H.M. Consul at Zanzibar; Mr. Henry Morton Stanley; and Mr. Joseph Thomson be hereby elected honorary members of the Society."

Mr. J. Thewlis Johnson moved and Mr. Elijah Helm seconded the next resolution, "That the very hearty thanks of the Society be tendered to the Provisional Committee, the President and Directors of the Chamber of Commerce, the President, Directors, and Hon. Secretary (Mr. John Slagg, M.P.) of the Manchester Athenæum, the various donors of books, maps, and money, to the Right Hon. Lord Aberdare, G.C.B., and to Mr. Frederic Holmwood for their various services and gifts to the Society."

Lord Aberdare replied to the vote of thanks, and then took the chair.

Mr. Jacob Bright, M.P., moved, and Mr. H. J. Roby, M.A., seconded the last resolution, "That the best thanks of the Society be now given to Mr. J. F. Hutton, J.P., for his kindness in occupying the chair, and for his valuable services to the Society."

Mr. Hutton responded.

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* The Secretary was appointed by the Council, February 4th, 1885.

SECOND MEETING,

In the Chemistry Theatre of The Owens College, February 11th, 1885, at 7-30 p.m. Dr. Greenwood, Principal of the Owens College, and Vice-Chancellor of the Victoria University, in the chair. The following gifts were announced:—

Mr. J. F. Hutton, J.P., £5.
Mr. A. R. Gallé, £1 1s.
Proceedings from the Royal Geographical Society.
Mr. George Wright, "Turkey in Europe."

The election of the following to be members of the Society was announced:—

ORDINARY MEMBERS.

The Rev. Patrick Lynch.	Mr. Henry Gray.

His Grace the Duke of Devonshire, K.G., Chancellor of the Victoria University, having given his consent to be nominated, Mr. H. M. Steinthal (Chairman of the Council), moved, Professor W. Boyd Dawkins, M.A., F.R.S., seconded, and the Vice-Chancellor (Dr. Greenwood) supported the motion, "That His Grace be elected the first president of the Society."

The motion was carried unanimously.

Mr. Arthur Arnold, M.P., read a paper "On our Commercial Opportunities in Western Asia," illustrated with a large map, and an exhibition of Persian garments. (*Vide ante,* pp 29-38). The address was listened to with close attention, and evoked frequent manifestations of approval. Questions being invited at the close, Mr. Elijah Helm, after expressing the profound pleasure which the lecture had afforded him, asked if Mr. Arnold could inform him whether the river Karun had been opened to navigation as was promised some time ago. Mr. T. Jarratt inquired whether, in the opinion of the lecturer, this country would not be likely to jeopardise its protection of the Persian Gulf by seeking to open up the rivers Tigris and Euphrates. Mr. Hewit remarked that the dominant thought in his mind, in listening to the lecture, had been that if the Manchester Geographical Society required any justification for its existence it had received it that evening. He hoped the members of the Chamber of Commerce would take note of the way in which British commercial interests were set at naught at Bagdad. Mr. George Harker inquired if there was a good road from Shuster to Ispahan. In replying, Mr. Arnold said he was sure that if the intention respecting the navigation of the Karun had come to anything, he would have heard of it. He believed it had broken down like so many other things did through intrigue at Teheran. In answer to the second question, he had to say he did not think we should jeopardise any existing interests by opening up the rivers he had named. The road between Shuster and Ispahan was not good.

Dr. Peter Royle spoke in high terms of the lecture, and moved a vote of thanks to Mr. Arnold and to the authorities of Owens College for the use of the hall. The motion was seconded by Mr. Zimmern, and passed with acclamation. Mr. Arnold briefly replied, and moved a vote of thanks to Dr. Greenwood, which was seconded by Mr. Hutton and passed.

The meeting then terminated.

THIRD MEETING,

At the Town Hall, Cheetham, March 2nd, 1885, at 7-30 p.m. The Very Rev. the Dean of Manchester in the chair.

The following gifts were announced:—

	£	s.	d.		£	s.	d.
W. S. B.	0	10	6	Mr. O. Andreasian	1	1	0
Mr. Harrison Veevers	1	1	0	Mr. Oliver Heywood, J.P.	10	0	0

Mr. José A. Infiésta, Vice-Consul for Spain, "Cuba with Pen and Pencil."

The election of the following to be members of the Society was announced:—

ORDINARY MEMBERS.

Mrs. A. H. Wood.
Miss Fanny Rutherford.
Mr. Frank Behrens.
Mr. Henry Behrens.
Mr. Henry Borchardt.
Mr. Frederic Burton.
Mr. Andrew Bennie.
Mr. W. G. Crum.
Mr. T. G. Daniel.
Mr. Gustav Eckhard.
Mr. Albert Jordan.
Mr. James M. Leake.
Professor D. J. Leech, M.D.
Mr. P. A. Parker.
Mr. Edward Salis Schwabe.
Mr. George Thomas.
Mr. William Trevor.
Mr. Clement Walmsley.
Mr. R. M. Wilson.

ASSOCIATE.

Mr. William Johnson.

LIFE MEMBER.

Mr. Oliver Heywood, J.P.

HONORARY MEMBERS.

Count Ferdinand de Lesseps.
Commander V. L. Cameron, R.N., C.B.

CORRESPONDING MEMBER.

Mr. Anton Greshoff, Banana, Congo.

The **Chairman**, in introducing Mr. Maples, said he must congratulate Manchester very heartily upon the formation of a Geographical Society. He ventured to suppose it supplied the missing link in the educational and, he might even say, the social organisation of this great community, and he looked forward to its occupying before long a remarkably influential—because so strikingly neutral—position amongst parties and lines of division, either political or intellectual, which characterised the great Geographical Society of London. He saw no reason why in this great northern city a similar degree of importance and influence should not attach in the future to the meetings of the Manchester Geographical Society. He did not need to enlarge on the necessary interest of geographical study. It was, in fact, the reading of the handwriting of nature upon the surface of the material world, just as geology, its sister and kindred study, was the reading of the handwriting of nature for the most part below the surface. The study of geography at the present time, he ventured to think, belonged to the pacifying movements of our time. There was a very striking relation, as there of course always had been, between geography and politics—between geography in particular and what we distinguished as foreign politics. At this moment we were all realising very profoundly that that great political question—the question of the duty and responsibilities of England to Egypt—which was the kindred question of our responsibilities, present and future, in India, of our place upon the great western continent of North America, in the Dominion of Canada, and, indeed, all questions of our foreign belongings, entered in a very high degree into the question of geography. Another kindred set of ideas to which geography was closely related was that of the great enterprise at once of civilisation and religion which we knew as foreign missions. Two names he would mention—not those of ministers of our English Church or the other great church—the Roman Catholic Church—which had again and again conquered sometimes the unwilling admiration of the very sturdiest Protestant for the magnificent organisation as well as the noble devotion which had characterised her conduct of her foreign missions. When they thought of those who had been the pioneers at once of civilisation and religion the names of Livingstone and Gordon arose at once to their minds. Of the former he would say nothing at present; of the latter their feelings were perhaps too deep to admit of their saying much. Only that afternoon he learned that a comparatively recent act of Gordon was to bestow, when he only possessed £750, £100 of that amount upon the Anti-Slavery Society, whose work he had so profoundly at heart. Taking those two names as the type of the higher Christian missionary, it was obvious that those persons in all cases, if they had the requisite gifts, had the very best opportunities for studying and acquiring a direct and intimate knowledge of the details and geography of hitherto unknown lands. He took it that we were witnessing—and he trusted it might be so—at the end of the nineteenth century, and in the modern education of to-day, the process repeating itself, in the vast new and still very little known territory of the interior of Africa, by which what we now called Europe was originally

Christianised and thereby slowly formed. One of the pioneers of that great work was with them that evening, and their study of a small part of the eastern coast of Africa that evening would be opened by one who had, by God's blessing, enjoyed the rare privilege of working for some eight or nine years in the most dangerous climate under the auspices of the Universities Mission. Mr. Maples, upon the subject of that portion of Africa, was recognised as a high geographical authority, and he had much pleasure in introducing him to the meeting.

The Rev. Chauncy Maples then read a paper (illustrated with a large map lent to the Society by the Royal Geographical Society, London) "On the Results of the Exploration of the Country lying between Lake Nyassa and the Indian Ocean. from the year 1880 to 1884." (The paper, with a sketch-map, will appear in the next Journal of the Society.)

Messrs. George Harker, Hicks, Sowerbutts, and others asked for further information on some parts of Mr. Maples's address. Mr. Maples replied to the enquiries thus made, and exhibited a native axe with very fine carved handle.

On the motion of Mr. Oliver Heywood, J.P., seconded by Mr. H. S. Wilkinson, barrister-at-law, and supported by Mr. G. W. Skelton, it was resolved that "The hearty thanks of the Society be hereby tendered to the Rev. Chauncy Maples for his kindness in giving the address to the Society."

The Chairman read a telegram from the Secretary of the Anti-Slavery Society of London, regretting that he was unable to attend the meeting, and stating that "the action of the Manchester Geographical Society would encourage the development of legitimate commerce in Africa, and thereby tend to suppress the slave trade."

Mr. Maples acknowledged the vote of thanks.

The Rev. Canon Woodhouse then took the chair, and on the motion of Professor T. H. Core, M.A., seconded by the Rev. L. C. Casartelli, M.A., Ph.D., the hearty thanks of the Society was given to the Very Rev. the Dean for his kindness in occupying the chair.

The Dean replied, and the meeting terminated.

GEOGRAPHICAL NOTES.

Monsieur Le Roux, Vice-Consul for France at Manchester, informs the President that the Paris Commercial Geographical Society desires to enter into communication, and to exchange publications with this Society. This very kind offer has been heartily accepted.

The Mediterranean.—The receding of the Mediterranean, says the *Diario* of Barcelona, is in few places so strikingly observed as near that city. At one particular spot, between the gasworks and the baths, a broad patch of land, four mêtres in width, has already formed itself, where formerly there was nothing but sea.

Colonial Possessions of the European Powers.—The Berlin correspondent of the *Précurseur* has been making, from official sources, a new calculation of the extent and population of the various colonial possessions of the European Powers, brought up to date. One is rather astonished to find the Congo State set down as a colonial possession of Belgium; the effect, probably, of a little pardonable national vanity. However, the calculation is of some interest, and we give the correspondent's table, with his remarks upon it:—

	Extent in Square Kilomètres.	Population.
Great Britain	19,820,919	214,086,000
Belgium (Congo)	2,000,000	30,000,000
Netherlands	1,928,180	27,600,000
France	1,800,000	17,000,000
Spain	436,396	8,105,000
Portugal	2,250,000	6,000,000
Denmark	194,577	127,000
Italy	632	1,330
Germany	?	?

"I have added to the French colonies the part obtained by France on the Congo, and have done the same thing for Portugal. As the statistical returns do not yet indicate the population of the Congo regions, I have had to proceed, as regards these regions, by a calculation of probability. Information regarding the extent and population of the new German colonies is still wanting. The extent of 2,000,000 square kilomètres which I have given to the Congo State does not correspond to the figures in the *Mouvement Géographique*, which gives 2,500,000 square kilomètres. As regards the presumed population of this State, I have taken Stanley's figures."

Commercial Communication with the Congo.—The *Mouvement Géographique* publishes a complete statement of the various steamer services now at work for trading purposes on the waters of the Congo. The factories of the Dutch house are united by eight steamers, and two new ones are building. The Central African Trading Company, the firm of Hatton and Cookson, of Boma, and, for the last two years, that of Daumas-Héraud, have each a small steamer; making eleven in all. To these must be added those of the Association, serving the Lower Congo, viz., the Belgique, Ville d'Anvers, Héron, and Espérance; total, fifteen between Banana and Vivi. With the seven steamers forming the flotilla of the Upper Congo, we have now 22 steamers, where but a few years ago only native pirogues and boats plied.

There are at present *five* lines of steamers connecting Europe with the Congo, viz. (1.) Two Liverpool companies, the British and African Steam Navigation Company, and the African Steamship Company. There is a departure from Liverpool every month, from the 1st to the 5th. Mean duration of voyage, 45 to 50 days, as there are numerous callings. Price, first class (board included), £35. (2.) The Anglo-Portuguese line, with a subvention from the Portuguese Government. Sailings from Hull, where only goods and coal are taken; passengers embark at Lisbon. End of line at Mossamedes. Departure from Lisbon on 6th of each month, under command of Portuguese officers. Voyage, Lisbon to Banana, 24 days; price, £31. (3.) Line of the Nieuwe Afrikaansche Handelsgenootschap of Rotterdam, specially established by the company to serve the factories of the Congo and the coast. Voyage from Rotterdam to Banana, with call of only a few hours at Madeira for coaling, 21 to 22 days. (4.) Line of the firm of Woermann, sailing from Hamburg on the 30th of each mouth. Voyage, 45 to 50 days; price, £30. (5.) The steamer Angola, of Messrs. Hatton and Cookson, Liverpool.

Russian Railway Enterprise. — M. Hagemans, Belgian Consul at Tiflis, reports under date of February 27th, that Russian papers announce the commencement of works for the line between Novorossisk and Ekaterinodor. The commercial importance of this line will be great. At present the traffic of South Russia is carried on principally through the ports on the West Coast of the Black Sea, Odessa, and Nicolaïeff; or those on the Sea of Azof, Berdiansk, Taganrog, and Rostov. On the East Coast there is no great commercial centre, although the province of Kuban, neighbouring the sea, is excessively rich and offers great advantages for trade. A glance at the map will show that all this region is dominated by a chain of lofty mountains, offshoots of the Caucasus, constituting a barrier which can be pierced only by a railway. Hence the importance of the Novorossisk-Ekaterinodor line, which will join the great railway from Rostov to Vladikavkas, tending to unite the Caucasus with the mouth of the Don, and thus draining all the trade of this region between the coast and the railway. In Asia, also, similar important works are projected. The Council of Ministers has decided to complete the railway connexion between the Ural and Siberia. The line will be traced by Oufa and Samara, and not by Kazan, and along the Kama and Echusovo rivers, as originally planned. What Northern Siberia loses thereby Southern Siberia gains. It is probable that a change of rate of the exports of this country will result. Finding a convenient route at the South they will be directed towards the Don and Black Sea, instead of towards the great fairs at Nijni-Novgorod, and Moscow.

The Societe de Geographie de Marseille has presented the Society with its Bronze Medal and Diploma. The Diploma has been handsomely framed, and adorns the walls of the Library.

The Journal of the Paris Geographical Society is full of interesting matter. El Hadj Adb-el-Kader Ould Baker, ambassador from Timbuktu, was received by this Society on 5th December last. He is the first native who has visited Europe, and no doubt his visit will help to open this great African market to the commerce of the world.

A SHORT NOTE ON THE ORIGIN OF THE SOCIETY.

IN February, 1879, a meeting was convened at the Chamber of Commerce to confer on the promotion of trade with Africa. In a speech on that occasion by the Rev. Dr. Vaughan, Bishop of Salford, pointed reference was made to the existence of societies of commercial geography in France, whilst in Great Britain, an essentially commercial country, and greatly dependent on her foreign trade, (if we except the Royal Geographical Society of London) such societies were unknown.

The remarks of the Bishop impressed many gentlemen present with a desire to form such a society, and as Manchester and the County of Lancashire represented a large aggregate of commerce and manufactures, it was thought that the establishment of a society in Manchester had a good prospect of success.

A small committee was thereupon organised to take the initiatory steps for carrying out the project, and a meeting of gentlemen was subsequently held at the Chamber of Commerce, presided over by the Bishop of Salford, at which a Provisional Committee was appointed to prepare a report and a list of names of gentlemen to be nominated for the Council and other officers of the Society.

This preliminary committee held several meetings and prepared a draft code of rules for the Society, to be called "The Society of Commercial Geography."

The rules were then circulated, with a letter on the subject from the then President of the Chamber of Commerce (Mr. B. Armitage), amongst those desirable to be invited to become members.

Two thousand of these letters were issued to individual members of firms in Manchester, gentlemen of local standing in the county and in Cheshire, and to the Directors of the Chambers of Commerce in Great Britain and Ireland.

The response was not encouraging enough to warrant the prosecution of the design and further proceedings were stayed, and eventually the attempt to found the Society at that time was abandoned.

Between 1879 and 1884 a great change for the worse had come over the commercial world, and owing in part doubtless to the action of the seventy Geographical Societies of the Continent upon their respective Governments, and partly to the extraordinary opening out of Central Africa by the gallant and intrepid explorers—Livingstone, Stanley, Cameron, Grant, Speke, Baker, Gordon, Schweinfurth, Pinto, and a host of others, the bare, barren waste of the maps of the centre of that great continent had blossomed into fertility, with water-ways of thousands of miles and vast populations waiting for the torch of civilisation and the olive branch of peace.

The European powers, having a keen appreciation of the value of colonial possessions to Great Britain, awakened to the desire to possess portions of this unappropriated territory, and Portugal, beginning to see the value of her West Coast possessions in a new and astonishing light, endeavoured to secure possession of the outlet of the Congo basin, as she had already possession of the mouths of the Zambesi.

This attempt on her part was frustrated; but all these matters coming upon the public almost simultaneously inclined the people to take an interest in the subject which at an earlier date they were not disposed to regard.

A movement was begun by Mr. Slagg and a few friends, and nearly all those who had taken part in the previous attempt to found a Geographical Society, rallied round this renewed effort, and have carried it to a successful issue.

Whilst the necessary preliminary work was proceeding, Mr. H. M. Stanley came to Manchester and delivered to a very large audience, presided over by Mr. John Slagg, M.P., at the Free Trade Hall, a brilliant address upon the value of Geographical Societies.

A meeting was held in the Mayor's Parlour, by permission of His Worship the Mayor (Mr. P. Goldschmidt, J.P.), and under his presidency a Provisional Committee was appointed, who prepared rules for the Society and made all the necessary preliminary arrangements.

Finally, at the Manchester Athenæum, on the 27th January, under the presidency of the President of the Chamber of Commerce (Mr. J. F. Hutton, J.P.), and assisted at that meeting by His Lordship the Bishop of Salford, the Right Hon. Lord Aberdare, G.C.B., President of the Royal Geographical Society, Mr. Arthur Arnold, M.P., Mr. Jacob Bright, M.P., Mr. H. M. Steinthal, and other gentlemen, the Society was founded.

It is hoped that. having now all the machinery of the Society complete with an office and library, monthly meetings, addressed by distinguished geographical authorities, and a Journal of which the present is the first instalment, a large measure of support may be secured, and a successful career inaugurated.

It may be interesting that the names of the noblemen and gentlemen who formed both the Provisional Committees should be placed on record.

The following are the names, distinguishing those who formed the first and the last Provisional Committee:—

THE PROVISIONAL COMMITTEES, 1879-1884.

*†The Right Rev. the Lord Bishop of Manchester.
*†The Right Rev. the Bishop of Salford.
*The Right Hon. Lord Houghton.
†The Right Hon. Lord Egerton of Tatton.
†The Right Hon. Lord Winmarleigh.
*†Mr. B. Armitage, M.P.
†Mr. A. Arnold, M.P.
†Mr. Jacob Bright, M.P.
*†Mr. F. W. Grafton, M.P.
†Mr. W. H. Houldsworth, M.P.
†Mr. Henry Lee, M.P.
*Mr. Hugh Mason, M.P.
*†Mr. John Slagg, M.P.
†His Worship the Mayor of Salford (Mr. Alderman Chas. Makinson).
*†Mr. Councillor P. Goldschmidt, J.P. (ex-Mayor of Manchester).
*†The Vice-Chancellor of the Victoria University.
†The Very Rev. the Dean of Manchester (John Oakley, D.D.)
*The Very Rev. Dean Cowie.
†The Very Rev. Monsignor Gadd.
†The Rev. W. B. Pope, D.D.
†The Rev. Canon R. Holgate Brown, M.A
†The Rev. L. C. Casartelli, M.A., Ph. D.
*Rev. A. M'Laren, D.D.
*Chancellor R. C. Christie.
†Professor Sir H. E. Roscoe, LL.D., F.R.S.
*†Professor W. Boyd-Dawkins, M.A., F.R.S
†Professor T. H. Core, M.A.
*†Professor A. W. Ward, Litt. D.
†Sir J. C. Lee, Knight, J.P.
*Sir John Iles Mantel, Knight, J.P.
*†Mr. J. F. Hutton, J.P., President of the Manchester Chamber of Commerce.
†Mr. G. H. Gaddum, Vice-President of the Manchester Chamber of Commerce.
†Mr. James Jardine, J.P.
*†Mr. Alderman Grundy, J.P.
†Mr. Alderman Joseph Thompson, J.P.
†Mr. Ald. J. M. Bennett, J.P.
†Mr. Benjamin Carver.
†Mr. Benjamin Davies.
†Mr. Elijah Helm.
†Mr. J. Thewlis Johnson.
†Mr. George Lord, J.P.
*†Mr. Alfred Neild.
†Mr. Henry Newall, J.P.
†Mr. Samuel Ogden, J.P.
*†Mr. H. M. Steinthal.
Directors of Manchester Chamber of Commerce.
†Mr. V. K. Armitage, M.A., J.P.
†Miss Lydia Becker.
†Mr. B. I. Belisha.
*†Mr. E. J. Broadfield, B.A.
*Mr. Thos. Browning, Hon. Sec.
*Mr. J. F. Cheetham, J.P.
†Mr. Alfred Crewdson.
†Mr. Edward Cross, J.P.
*Mr. J. Stanley Darbishire, J.P.
*Mr. Rudolph Dehn.
*Mr. Arnold Dehn.
†Chevalier R. Froehlich, K.C.J.
†Mr. A. R. Gallé.
†Mr. J. Robert Heaven.
†Mr. Abel Heywood, jun.
†Mr. Oliver Heywood, J.P.
*Mr. Jas. Heywood, F.R.S., J.P.
*Mr. C. P. Henderson, jun., J.P.
†Mr. William Kessler.
†Mr. H. M. Langley.
*Mr. H. J Leppoc.
*Mr. John Mitchell.
†Mr. J. H. Nodal.
*Mr. E. C. Potter.
*†Mr. H. J. Roby, M.A.
†Mr. J. Rycroft.
*Mr. C. P. Scott.
†Mr. Geo. W. Skelton.
†Mr. Mark Stirrup, F.G.S.
*†Mr. T. R. Wilkinson.
*Mr. R. M. Wilson.
†Mr. George Wm. Rayner Wood, J.P.
†Mr. James Worthington.
†Mr. Eli Sowerbutts, Hon. Sec. *pro tem.*

Those marked * were the Members of the Provisional Committee in 1879.
Those marked † were Members of the Provisional Committee of 1884.

NOTICES TO MEMBERS.

Affiliated Societies.—The Council has resolved,—"That any Society (outside a radius of ten miles from Manchester), which shall make a donation to the Manchester Geographical Society of £2 2s. this year, such a contributing Society shall be supplied with a copy of the Journal, shall have twelve tickets of admission to the ordinary meetings of the Society, and the members of the contributing Society shall be allowed to use the library."

Meetings.—The Council has resolved that in future the ordinary meetings of the Society shall be held (if possible), on some day in the first week of the month.

The Council meetings to be held on the last Wednesday in every month, at three o'clock p.m.

At the next meeting of the Society, May 12th, J. Annan Bryce, Esq., of London, will give an address on "Siam and the Shan States."

The President and Directors of the Manchester Athenæum have invited the members to hear an address on May 11th, at the Athenæum, by Lalmohun Ghose, Esq., Barrister-at-Law, on "The Government and People of India."

A meeting of the Society will be held at the Manchester Athenæum on Tuesday, May 19th, 1885, at 7-30 p.m., when Major General Sir Frederic J. Goldsmid, C.B., K.C.S.I., will address the Society "On Northern India and Afghanistan."

The Journal.—The next number of the Journal will contain the Rev. Chauncy Maples's paper "On the Result of Explorations between Lake Nyassa and the Indian Ocean, from 1880 to 1884," with a sketch map. A list of the members of the Society will be issued in the next number of the Journal.

Finance.—The Council desires to inform the members of the Society that subscriptions and donations may be paid to the Treasurer at the Manchester and Salford Bank, Mosley Street, or at the office of the Society. The Treasurer has received up to and including April 29th, 1885:—

	£	s.	d.	£	s.	d.
Subscriptions From 8 Life Members..................	31	10	0			
" " 126 Ordinary Members	132	5	0			
" " 24 Association Members	12	12	0			
				176	7	0
Donations on account of the Preliminary and Furnishing expenses				44	4	6
				220	11	6

The permanent expenses of the Society are now daily accruing and the Treasurer will be obliged to members if they will at once pay their subscriptions. An expense, estimated at about £150, has been or will be incurred for Preliminary and Furnishing Account.

The Treasurer wlll be glad to receive donations to meet these expenses.

List of books presented to the Society for reference by the members in the Library:—

The *Journal of the Royal Geographical Society*, 1830 to 1861, and 2 Index Vols.
Hawaii. R. Monner Sans of Barcelona.
Liberia. Do. do.
Notes on New California, by Rev. Padre F. Paloú (a very rare book). 4 Vols.
Handbooks of "New Zealand" and "New South Wales." 4 Vols.
Notes on Commercial Geography. Rev. L. C. Casartelli, M.A., Ph.D.
Lecture on do. by R. M. Moir.
Statistical Annual and Map of Venezuela. 3 copies.
Statistics of Italy for 1884.
Census of Italians Abroad, 1884.
Handbook of Canada.
Do. of Arkansas.
Turkey in Europe. Lieut. Baker.
Cuba with Pen and Pencil. S. Hazard.
Les Belges au Congo, Maps and Illustrations.
Philips' Handy General Atlas of the World. New Edition, 1885, and Index to 40,000 places.
Blue Books, Maps of Cameroons and Transvaal, and Charts of Scotch Ports.
Catalogue of Athenæum Library.
Proceedings of the Royal Geographical Society, 1885.
Scottish Geographical Magazine, 1885.
Publications of Foreign Geographical Societies, as indicated on pp. 39 and 40.
Chart of Fly River, by Rev. S. Macfarlaine.
Map of Africa, 1660. Photograph.
Folio of Photographs, by Prince Roland Bonaparte. Kalmouks.
Folio of Photographs, by Prince Roland Bonaparte. Atchinois.
And Maps of Africa, Afghanistan, &c., &c.

☞ The Library is open to members from ten till four.

Books, Maps, &c., intended for Notice or Review in the Journal, should be sent to the Secretary, 44, Brown Street, Manchester, not later than the 10th of each month.

RULES

OF THE

MANCHESTER GEOGRAPHICAL SOCIETY.

THE
OFFICERS AND COUNCIL OF THE MANCHESTER GEOGRAPHICAL SOCIETY FOR 1885.

President.

His Grace the DUKE OF DEVONSHIRE, K.G., Chancellor of the Victoria University.

Vice-Presidents.

The Right Rev. the Lord Bishop of Manchester.
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The Manchester Geographical Society.

I. OBJECT AND WORK.

The object of the Manchester Geographical Society is to promote the study of all branches of Geographical Science, especially in its relations to commerce and civilization.

The work of the Society shall be:

1. To further in every way the pursuit of the science, as, by the study of official and scientific documents, by communications with learned, industrial and commercial societies, by correspondence with Consuls, men of science, explorers, missionaries and travellers and by the encouragement of the teaching of geography in schools and colleges.

2. To hold meetings at which papers shall be read, or lectures delivered by members or others.

3. To examine the possibility of opening new markets to commerce and to collect information as to the number, character, needs, natural products and resources of such populations as have not yet been brought into relation with British commerce and industry.

4. To promote and encourage, in such way as may be found expedient, either alone or in conjunction with other Societies, the exploration of the less-known regions of the earth.

5. To enquire into all questions relating to British and Foreign colonization and emigration.

6. To publish a Journal of the proceedings of the Society, with a summary of geographical information.

7. To form a collection of maps, charts, geographical works of reference and specimens of raw materials and commercial products.

8. The Society shall not enter into any financial transactions beyond those necessarily attached to its declared object.

II. ORGANIZATION.

9. The Society shall consist of ordinary, associate, corresponding and honorary members.

10. A Council shall be chosen annually from the ordinary members to conduct the affairs of the Society. It shall consist of a President, four or more Vice-Presidents, a Treasurer, two or more Honorary Secretaries (including a Secretary for Foreign Correspondence) and twenty-one Councillors.

11. There shall be three Trustees elected by the Society, who shall hold office until death, disability, insolvency or resignation. They shall be members of the Council by virtue of their office.

12. Any vacancy occurring in the Council during the current year may be filled up by the Council.

III. ELECTION OF MEMBERS.

13. Every candidate for admission into the Society as an ordinary or an associate member must be proposed by a member. The proposal shall be read out at the next Ordinary Meeting of the members and any objection shall be forwarded in writing to the Secretary within seven days.

14. The election of members is entrusted to the Council. The names of those elected shall be announced from the chair at the next Ordinary Meeting after the election.

15. The Secretary shall within three days forward to every newly-elected member notice of his election a copy of the Rules of the Society and a card announcing the days on which the Ordinary Meetings will be held during the session. But the election of an ordinary or associate member shall not be complete, nor shall he be permitted to enjoy the privileges of a member until he shall have paid his first year's subscription. Unless such payment be made within three calendar months from the date of election the election shall be void.

16. The Council shall have power to elect honorary and corresponding members.

17. Women shall be eligible as members and officers of the Society.

IV. PAYMENTS.

18. An ordinary member shall pay an annual subscription of £1. 1s., or he may compound by one payment of £10. 10s. An associate member shall pay an annual subscription of 10s. 6d. The Society's year shall begin on the first day of January.

19. Members shall not be entitled to vote or to enjoy any other privilege of the Society so long as their payment shall continue in arrear, but associate members shall not vote nor shall they take any part in the government of the Society.

20. The first annual payment of a member elected in November or December shall cover his subscription to the 31st December in the year following.

21. On the first day of January in each year there shall be put up in the rooms of the Society a complete list of the members with the amount of their subscription due and as the amounts are paid the fact shall be marked on the list.

22. Notice shall be sent to every member whose subscription shall not have been paid by the first of February and if the arrears are not discharged by the first of July the Council may remove the member from the list of members.

V. MEETINGS.

23. The meetings of the Society shall be of three kinds—Ordinary, Annual, and Special.

24. In all meetings a majority of those present shall decide all questions, the President or Chairman having a casting vote in addition to his own.

ORDINARY MEETINGS.

25. The Ordinary Meetings of the Society shall be held once a month, from the month of October to the month of May, or oftener, if judged expedient by the Council.

26. All members whose subscriptions are not in arrear shall have a right to be present. All ordinary members shall have the privilege of introducing one visitor.

27. The order of proceeding shall be as follows:—

(*a*) The minutes of the last meeting to be read and if correctly recorded they shall be signed by the Chairman.

(*b*) Presents, whether of money, books, maps, charts, instruments or specimens, made to the Society to be announced.

(*c*) The election of new members to be declared and the names of candidates to be read.

(*d*) Papers and communications to be read and discussed.

28. At these Meetings nothing relating to the rules or management shall be brought forward, but the minute book of the Council shall be on the table at each meeting for the inspection of any member and extracts therefrom may, with the consent of the Chairman, be read to the meeting on the requisition of any member.

29. On occasions of exceptional interest the Council may make provision for a larger admission of visitors.

ANNUAL MEETINGS.

30. The Annual Meeting of the members shall be held at such time and place as the Council shall determine.

31. Fourteen days' notice of this meeting shall be sent to every member within the United Kingdom, who has given his address to the Secretary and notice of the meeting shall be advertised in such newspapers as the Council may direct.

32. The object of this meeting shall be to receive the Annual Report of the Council and the Treasurer's Balance Sheet, to hear the President's address, to elect the Council and officers for the ensuing year and to transact any other business.

33. Any two ordinary members may nominate candidates for the Council or for office not later than one week prior to the day of election and the names of

candidates so nominated shall be at once put up in the rooms of the Society. The election of the Council and officers shall be by ballot.

SPECIAL GENERAL MEETINGS.

34. The Council may call a Special General Meeting of the Society whenever they shall consider it necessary and they shall do so if required by twenty ordinary members.

35. A week's notice of the time and object of every Special Meeting shall be sent to all members. No other business shall be entertained than that of which notice has been thus given.

36. Twenty ordinary members shall form a quorum.

VI. COUNCIL AND OFFICERS.

THE COUNCIL.

37. The government of the Society shall be entrusted to the Council, subject to the rules of the Society.

38. The Council shall annually elect a Chairman and Vice-Chairman.

39. The President or the Chairman, or any three members of the Council, may at any time call a meeting thereof, to which every member of the Council shall be summoned.

40. Seven shall form a quorum.

41. In order to secure the more efficient study and treatment of the various subjects, which constitute the chief work of the Society, the Council may appoint Committees for special purposes. These Committees, with the approbation of the Council, may associate with themselves any persons — whether members of the Society or not — from whom they may desire to obtain special assistance or information. The Committees shall report to the Council the results of their proceedings.

42. The President, Chairman, Vice-Chairman of the Council, and the Honorary Secretaries, shall, by virtue of their offices, be members of all Committees appointed by the Council.

PRESIDENT AND VICE-PRESIDENTS.

43. The President is, by virtue of his office, the Chairman of all the meetings of the Society. In the absence of the President, one of the Vice-Presidents may preside.

CHAIRMAN OF THE COUNCIL.

44. It is the duty of the Chairman of the Council to see that the rules are properly observed, to call for reports and accounts from Committees and officers and to summon, when necessary, special meetings of the Council and of Committees.

TREASURER.

45. The Treasurer has the charge of all accounts; he shall pay all accounts due by the Society after they have been examined and approved by the Council.

46. He shall see that all moneys due to the Society are collected, and shall have power with the approval of the Council to appoint a collector. All moneys received shall be immediately paid to the Bankers of the Society.

47. The bank passbook and the books of account shall be laid upon the table at every Ordinary Meeting of the Council.

48. The accounts shall be audited annually by two members, who shall be elected at an Ordinary Meeting at least one month before the Annual Meeting.

SECRETARIES.

49. The duty of the Honorary Secretaries shall be:—

(*a*) To conduct the correspondence of the Society and of the Council.

(*b*) To attend the meetings of the members and of the Council, and minute their proceedings.

(*c*) At the Ordinary Meetings, to announce gifts presented to the Society since their last meeting; to read the names of all new members and of candidates for admission and the papers communicated to the Society, which have been directed by the Council to be read.

(*d*) To have immediate superintendence of all persons employed, to make arrangements for the meetings of the Society and to take charge of all maps, books, furniture, and other effects.

50. It shall be the more especial duty of one of the Honorary Secretaries to conduct, as may be directed by the Council, correspondence with Foreign Societies and with persons resident abroad.

51. In addition to the Honorary Secretaries there shall be a paid Secretary appointed by the Council, whose duties shall be to assist the Honorary Secretaries, to issue the notices of the Council and of the Society and to act under the instructions of the Council.

Form of Proposal for Membership of the Manchester Geographical Society.

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THE JOURNAL

OF THE

MANCHESTER GEOGRAPHICAL SOCIETY.

ON THE RESULTS OF THE EXPLORATION OF THE COUNTRY LYING BETWEEN LAKE NYASSA AND THE INDIAN OCEAN, FROM THE YEARS 1880 TO 1884.

BY REV. CHAUNCY MAPLES.

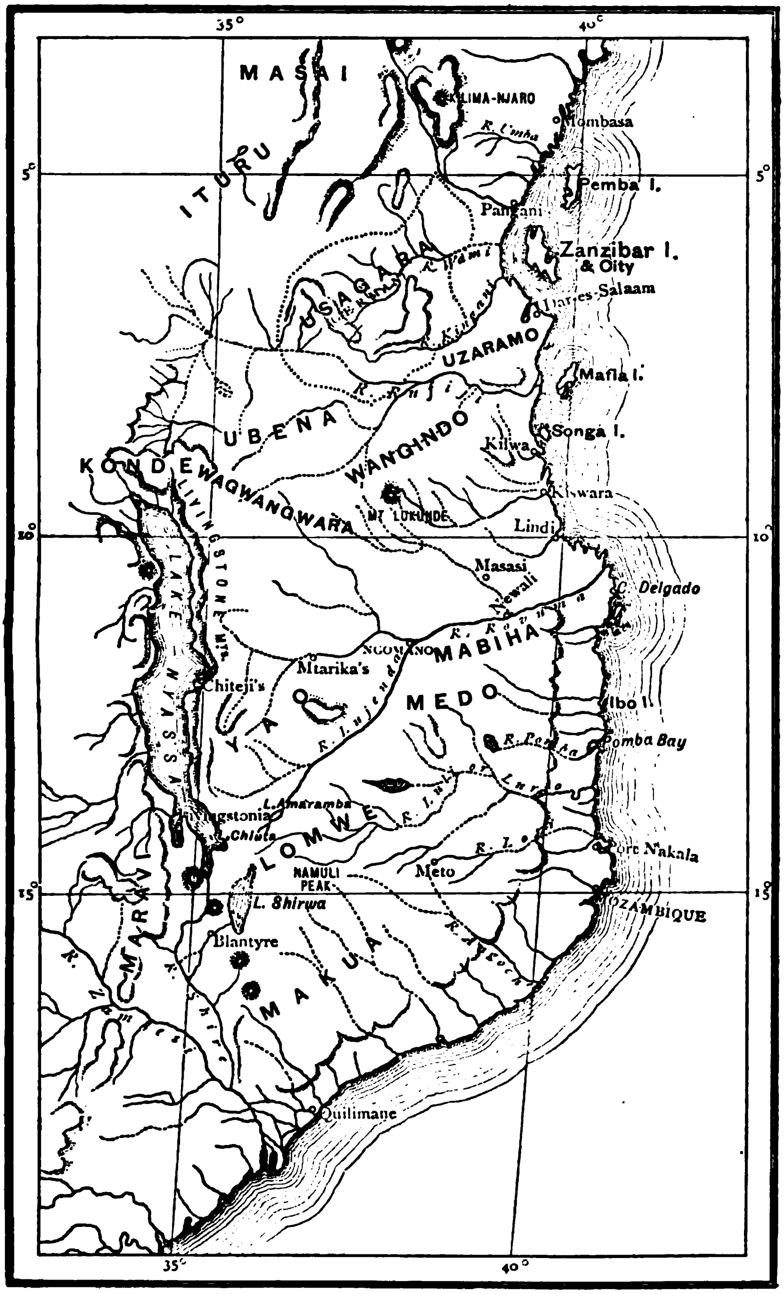
[Delivered before the Members of the Society, at the Cheetham Town Hall, March 2nd, 1885.]

IN selecting a subject on which to address the Manchester Geographical Society I have been guided by a desire to speak of that region of Africa only of which I can claim some personal knowledge. The enormous impetus given to East African exploration and missionary enterprise by the writings of Livingstone and Stanley was well known, so that to give an adequate account of the results of travel in the whole of Eastern Intertropical Africa since Mr. Stanley's expedition in search of his great predecessor up to the present day, would require, not one, but several folio volumes. I will therefore offer no apology for the narrow limits to which I have restricted myself, but proceed at once to describe them, and then to set before you as concisely as possible the knowledge gained during the past five years of the country thus circumscribed. The important East African town of Kilwa, at which for upwards of one and a half years the British India mail steamers have called regularly once a month, lies somewhat north of the 7th degree of southern latitude. From that town to the port and city of Mozambique there are rather more than 8°, Mozambique being situated on the 15th degree south latitude. Lake Nyassa lies within these limits of latitude, extending in its extreme length over nearly 5°. Its northern limit is about half-way between the 9th and 10th parallel of latitude, while its southern end reaches to ½° beyond the 14th parallel. Since the Lake lies almost due north and south, and the coast line also, the width of the country between the north end and the coast is nearly the same as that which lies between the south end and Mozambique, and embraces roughly 5° of longitude. About 140,000 square miles is the area of this piece of country, which five years ago was a veritable *terra incognita* to all Europeans. That it was so wholly unknown is scarcely surprising when we reflect in whose possession had been for the last 400 years, the fringe of coast land which bounded it on the east. Whatever may have been the achievements of Portugal in the days when her sailors were the admiration of the world, of recent years we have seen little of that spirit of enterprise and adventure which formerly was so prominent a characteristic of her sons. Now that England has led the way, such men as Ivens, Capello, and Serpa Pinto have shown themselves by their intrepidity and their endurance no unworthy successors of those early explorers and sea captains of Portugal who, 400 years ago, won such renown for themselves and for their country as twice 400 years will not be able to efface. I have not thought it necessary to search the pages of Portuguese history to trace whether, in the early years of Portuguese occupation the interior of the country may have been visited by Portuguese settlers. If this has been the case, certain it is that they have left no traces of themselves there at this day, and therefore the investigation would be of little use to us. The only other name that emerges in the present century in connection with Portugal and this territory is that of the traveller Silva Porto, whose journey to the east coast of Africa from the Lake is said to have been made in the years 1853–4. This gentleman was a trader who resided for many years in the interior, and is, I am told, still alive. He is generally supposed to have crossed Africa from west to east, but, in justice to him, it must be said he is not responsible for this erroneous statement. An abstract of the original record of his journey was made by the geographer M'Queen, in the Journal of the Royal Geographical Society (vol. xxx., 1860, pp. 136–154), and it is in this abstract that the mistake has been made, and the idea conveyed that Silva Porto himself traversed the country between Lake Nyassa and the coast and emerged at Ibo. The real fact is that Porto accompanied the Arab traders from Bihé to Kutonga, on the upper Zambesi: from this latter place he despatched his servant Chacahanga, and this man, not the traveller himself, reached the shores of the Indian Ocean, after passing through Yao and Makua land, and, along the River Rovuma to Chisanga and Ibo. Ravenstein's new map of Eastern Africa gives the route of Porto's servant and the places mentioned by him in his itinerary, but more recent travellers have found no traces whatever of any one of the villages or towns through which he professes to have passed.

The only other traveller who penetrated this still little known country up to the time at which my record begins was the young German doctor, Roscher, who was treacherously murdered at Kisuguin, near Losewa, on the shores of Nyassa. Owing to the loss of his diary we have but a few scanty notes of his journey from Kilwa to the Lake, his arrival at which was on November 19, 1859. Those who desire to learn the particulars of this journey so far as we have them may turn to Von der Decken's great work—"Reisen in Ost Afrika"—where all that is known about this disastrous journey is carefully summarised. Practically, however, poor Roscher's travels added nothing to our knowledge of the country, and for another 20 years the district remained almost a blank on our maps. Von der Decken himself made one attempt to reach the Lake, and starting from Kilwa, reached a spot on the caravan route scarcely one-third of the way to Nyassa, and but just touching the latitude of its northern extremity. Here, however, he abandoned his intention of proceeding to the Lake, and returned to Kilwa by the same road by which he had left it, continuing his travels and explorations henceforward in the country north of Zanzibar.

A mere reference to the "Last Journals" of Dr. Livingstone is sufficient to call to your remembrance the valuable contribution made by that first, and, may I not still say, greatest of all African travellers, to our knowledge of this part of East Africa. The line of his march was touched not many years later by the former Bishop of the Universities' Mission, my late honoured chief, Bishop Steere, who made a most rapid and successful journey from Lindi, on the coast, to Mataka's town of Moembe, where Livingstone before him had made some stay. Bishop Steere's journey in 1875 was followed up in the succeeding year by the planting of our Mission Station at Masasi, with which I have been connected, and where I have spent most of my time from that year until now. For several years we were engaged so much in work of a missionary character in the neighbourhood of this station that none of us made long journeys or gained much knowledge of the country lying beyond the district of Masasi. As time went on, however, it became necessary for us to seek fresh fields of labour in the natural extension of our missionary efforts, and when we began to travel northwards and southwards and westwards from Masasi, others were in the field who, by reason of their scientific attainments, such as none of ourselves possessed, were able to lay down with far greater accuracy the geographical features of the country, and to contribute more perhaps than we were able to do towards a thorough knowledge of its main characteristics. The travellers to whom I allude are Mr. Joseph Thomson, whose exhaustive account of his journey through the Rovuma district leaves little to be desired in that most interesting narrative; and Consul O'Neill, Her Majesty's Consul at Mozambique. The latter gentleman, during the past five years, has found time to make a series of journeys in the interior, records of which have from time to time appeared in the "Proceedings" of the Royal Geographical Society, having been previously read before that society. To the names of Messrs. Thomson and O'Neill must be added those of my colleagues, Messrs. Johnson and Porter, the former of whom during a residence of seven years in Africa found time to traverse on foot several thousands of miles in the districts on the east side of Nyassa. Of my own travels I shall speak incidentally only, premising that they have been insignificant as compared with those of either Mr. Johnson or Consul O'Neill. I will now endeavour to lay before you, as concisely as may be, not fresh information so much as what has been already collected by the two travellers and ourselves (the missionaries) in the course of our journeys, which have been prosecuted in the one case with exploratory, in the other with missionary, objects in view. The fact that what I have to say lays claim to no originality must be the apology for what may appear to some as little more than a reproduction of what others have written, and what has already been published. And, further, I will add that my object will have been gained if in the following remarks—so largely based upon the observation of others as they will be—I succeed in stirring you up to take a fresh interest in a somewhat remote corner of that continent to which, at the present time, all eyes are turned.

While it is to Dr. Livingstone that we owe all our early information about the river Rovuma, its valley, and the people who dwell there, as it is also to him we are indebted for the first and, in some respects, the fullest accounts of Yao Land and its inhabitants, we have to thank those whose names I have just brought before you for clearing up for us what still remained obscure, and for giving us a still closer insight into the geography, ethnology, zoology, and geology of those regions. Livingstone passed along the Rovuma reaching the confluence of its waters with the great river Lujenda, that flows into it at Ngomano from the south-west, and tracing it as far as Mtarika's town, then quitting its banks and striking southward towards Nyassa. This was in the year 1866. Within the last four years the very source of this noble river had been discovered and reached both by Mr. Johnson and Mr. Porter, who found it rising in a spongy marsh among the Gwangwara tribe, who are at present located in these healthy uplands. Nor does the source of the equally important Lujenda any longer remain a mystery. Native report had long borne witness to its rise in a large lake south-east of Nyassa. This lake had been conjectured by some of us to have been the lake Shilwa, and, indeed, Mr. Johnson in one of his journeys believed that he had actually followed the Lujenda to the south until he saw its waters issuing from this lake. After another year or two, Lieut. O'Neill visited Shilwa from the east, skirted its northern shores, and proved incontrovertibly that no water runs out of it from the north. He found a wooded range of hills from 30 to 40 feet in height, extending throughout the whole length of the north end of the lake, thus proving that no river flows out of it northwards. Determined to settle the question as to the true source of the river, he pursued his journey northwards, and arrived at two lakes about 15 miles long each, and connected by a small stream called the Msambiti: the southernmost of these lakes is named Chinta, while that to the north is Amaramba. Beyond all doubt it was lake Amaramba and not Shilwa that Mr. Johnson had reached when he thought himself on the shores of the latter lake, and spoke of the Lujenda as taking its rise therefrom. Mr. O'Neill has completely settled this question by his careful investigation of the whole locality, and has proved that the northern end of Lake Shilwa, so far from being the source of the Lujenda, is full 10 miles south even of that succession of swamps and lakelets which continues for a distance of another 40 miles, until at the north end of Amaramba, the last of the series, the noble river Lujenda begins to flow out. Not only have the last few years of exploration in these regions yielded up the secret of the rise of the Rovuma and Lujenda, but they have also solved the question that had arisen as to the existence of snow-clad mountains in the same country. It was a strange coincidence that three and a half years ago, travelling southwards from Masasi, and when Mr. O'Neill was taking one of his westward journeys from Mozambique, we should each of us, without the knowledge of the other, have received information from different native sources of the existence of snow-clad peaks in the Lomwe country. I believe our letters announcing this were received by the Royal Geographical Society at the same time. I returned to my station without being able to investigate the matter. Mr. O'Neill reached a spot at no great distance from the peaks, said to reach an altitude beyond the snow line, but the caps of these mountains were enveloped in clouds during the whole time of his short sojourn in their vicinity, and he was forced to return to the coast without solving the question. A subsequent visit to this district was rewarded by a full and clear view of these Namuli peaks, which were not only guiltless of a snow mantle, but which, according to Mr. O'Neill's observations, do not exceed 9,000 feet in height. Thus the supposition that snow-clad mountains exist between Nyassa and the coast may now be positively and finally contradicted, nor can it any longer be maintained that we must look here for links in a chain of which it had been said that Kilima-njaro and Kenia were but another part. The snow line in these latitudes would be found at an altitude of not less than 16,000 feet. It is now an ascertained fact that the loftiest mountain in the whole of the country under discussion scarcely exceeds in height one half of the required elevation for permanent snow. The expedition in the course of which Mr. O'Neill settled for ever this disputed point, was fruitful also in further elucidation of the geography of this hitherto unknown locality, for while making his survey of the Namuli mountains he found that he had encamped on the watershed of the great rivers Luli and Quizungu, the embouchure of the former of which is found just half way between Ibo and Mozambique. The Luli itself he crossed very near its source in the Mrubi hills at a point some 25 miles east of the southern end of Lake Shilwa. This river, whose upper reaches have been visited by Mr. O'Neill alone of European travellers, and whose course for the last twenty miles I myself traced three years ago, is in point of length and volume only second, if indeed it is second, to the Rovuma. Like that river, and like the only other two of any importance that flow to the coast between Kiswere and Mozambique, the Luli's course is north-easterly. I found it at its mouth to be nearly a mile wide, and easily fordable at low water. As yet we know nothing of this river between the point where Mr. O'Neill crossed it and that where I struck it in 1881, though it is certain that it receives the waters from many tributaries flowing from its southern watershed, and is throughout a great part of its length a river of considerable volume. From what we have been able to gather, I should estimate its length, with full allowance for windings, at not less than 400 miles. The brief account of recent discoveries I have now laid before you will serve to introduce some notice of the geological, zoological, ethnological, and political characteristics of the area I have selected to describe. First I must say something about the native races who inhabit that tract of country. By far the greater part of it is owned and inhabited by the Makua tribe. It is these people with whom the Portuguese on the coast have lived cheek-by-jowl for well nigh 400 years, without succeeding in establishing friendly relations with them or being able at the present time to wander in their country with any security. It is these people again who are found as far west as Nyassa itself in some parts, and as far north as my own mission station, while their southern limits extend far beyond the region I am illustrating. Northwards on the coast their villages and towns are found as far as Msimbwa, beyond which place they cease to be located. I know these people well, and have lived amongst them, and travelled through their country repeatedly during the past eight years without suffering in any way at their hands. I believe them to be, on the whole, a peace-loving, industrious, and harmless people, of very average intelligence as these races go, and very amenable to civilising influences when carefully and judiciously exercised. Their language is extremely difficult to acquire, and although I am the author of the only existing grammar of the language, I am quite unable to converse with these people in their own language. So vast is the country inhabited by this one race that it is difficult to say what is their real centre; but certainly of a very large and important section of the tribe that centre is to be found at Meto, where a wide-ruling young scoundrel, Mwalija by name, now holds sway. Meto is a very lovely district, for there we found a green and well-watered valley, flanked by picturesque granite hills, and brought to a high state of cultivation. All the fruit trees of the coast grow there in rich luxuriance, and scarcely a wild forest tree is standing anywhere. In place of the endless mimosa and acacias of the Makua forest, I found the mango, the lime, the lemon, the guava, and the cashew, while even tall coco-palms bend their heads gracefully and complete the picturesqueness of a scene which remind one forcibly of the tropical beauty of the groves and plantations of Zanzibar. As my eyes rested gladly on this beautiful country which I had reached after traversing so many leagues of dreary forest land, I might almost have forgotten where I was had not my contemplations been rudely burst in upon by the piteous spectacle of 2,000 slaves who with their drivers were encamped close by. Meto then was, and still is, I fear, a recognized centre for the slave caravans which, coming from various places to the north-west, west and south-west, here converge and then, diverging again, ultimately reach the coast either on the Portuguese main or still further north in the neighbourhood of Kilwa Kiswere, Mikindani or Lindi. The Walomwe, who have a character for fierceness and savagery above that of their neighbours and whose central home would appear to be the Namuli range, can no longer be reckoned as merely one of the subdivisions of the widespread Makau people. Mr. O'Neill's researches and investigations both into their language and their racial peculiarities have, I am convinced, satisfactorily established their claim to be classed as a separate tribe. Mr. O'Neill has also shown that their character for ferocity and inhospitableness is not borne out by an intimate acquaintance with them. Of the Yao tribe I will say little, as they are tolerably well known to all readers of Livingstone's travels. Their country is circumscribed within the limits of the fork formed by the Rovuma and Lujenda, and bounded by the Lake along whose shores their villages are found, with the exception of that bit of coast lying between Masenge's and Chitesi's where only Nyassa tribes are at present located. The Yao language is spoken in four dialects differing only slightly from one another, and representing the four main divisions of the tribe. The Yao are pre-eminently the travellers of all this region. Quick, intelligent and enterprising, they take the lead of all the other races, but are ruining themselves and their country by persisting in receiving and welcoming the slave dealers, and mixing themselves up in slave raids and forays. The missions have had much to do with these people, and they number their converts mainly from their tribe. The Yao are neither fierce, nor shy of receiving strangers. On the contrary they usually give a ready welcome to both missionaries and travellers, and are especially friendly towards the English. North of the Yao are found the little known Niudi, and south of their southern boundary are found other Nyassa tribes, of whom it is not necessary to speak more particularly. Along the Rovuma valley are found scattered remnants of once powerful tribes now almost extinct in these parts, such as the Mwera, the Donde, the Gindo, the Matambwi, and others. There are, however, two tribes who still hold an important and prominent position in the country I am describing, and they claim a more particular notice. These are the Makonde and the Maviha; the former occupying a triangular plateau whose base is the cliff-like escarpment running almost parallel to the Rovuma from the coast to a distance of 90 to 100 miles inland; and the latter located in the hill country which rises on the south of the same river, separated by a distance of thirty to forty miles from the Makonde hills, but doubtless only a continuation of the same plateau which in the course of ages a long process of denudation has served to divide into two parts. The languages of these two tribes are very closely allied, and though there are upon close inspection strong points of resemblance in their features, it must be confessed that there are also a few very marked differences. The Maviha, like the Walomwe, have borne a character for treachery and cruelty which, in all probability, has been attributed to them without good reason. Their geographical limits seem to be the river Msalu on the south, the termination of their own hills on the north, the sea perhaps on the east (though few of their villages are met with on the coast), and the western edge of their hills on the west in the same longitude as the mission station of Newala, from which, looking due south, can be seen the abrupt termination of those hills at their north-western corner. The Makonde are decidedly not wanting in vigour or industry. The diligence with which they cultivate the soil is proverbial, and of late they have been prosecuting with a great amount of activity the india rubber trade. Only one other tribe calls for a distinct notice, namely that hostile band, the Maviti, known by a number of different names, but taking its origin from that race (the Zulu) who fought so bravely against British forces a few years back, and the settlement of whose country is a question ever recurring. Most people are aware that the so-called Maviti, who are



SKETCH-MAP OF EAST AFRICA.

the terror of the whole Nyassa districts, and whose raids and predatory incursions have extended from the west of the Lake to the shores of the Indian Ocean, are in fact the survivors of a Zulu army which at some time, even before the days of the famous King Chaka, journeyed northwards and ultimately made its head-quarters in the Nyassa district. These people are now variously known as the Angoni, Amachonde, Mazitu, Maviti, and Magwangwara. The Magwangwara are now separated, and have become the dire enemies of the Maviti, but originally, beyond all doubt, they were one with them. It is not too much to say, that the Maviti and Gwangwara form the main factor in the life of the whole of that part of the world. They are the cause of its depopulation, of its devastation and of its ruin. By their raids they feed the slave market, they reinforce their bands, and they provide themselves both with slaves and with cattle. They live for plunder, and their lust is to conquer and hold in a state of vassalage every other tribe and people of whom they have ever heard. The Gwangwara are at present settled near the sources of the river Rovuma.

From what has now been said about the various tribes inhabiting the country between Nyassa and the coast, it will have been noticed that by far the most numerous people are the Makua. I have already indicated their inland boundaries, and it will have been gathered that on the east they come down to the coast, which is indeed fringed with their villages throughout the whole length of it, from Misanje point, near Cape Delgado, to Quilimane river. It is remarkable, that in spite of the fact that for more than a century Banyans and other traders from India have settled everywhere along this coast, there is so inappreciable a proportion of half castes found there. Some will attribute this fact to the "smallness of the inroads which Portuguese colonisation has made there," while others see the cause of it in "a certain want of affinity between the Makua and the various races of whites that have settled upon the coast." Turning to the geological features of the country, it seems to be pretty well established that an almost uniform character marks the greater part of this vast area from the river Lufiji in the north, to the neighbourhood of the Zambesi on the south. The character of the soil, and of the rocks which crop up through it in the Rovuma valley and Yao forest, shows that the sandstone plateau of Makonde rests unconformably on a stratum of metamorphic rocks, alike in character to the great gneiss boulders and crags which are the distinctive feature of the whole country. The mica schist, which is found near the Rovuma and Lujenda junction, is garnetiferous, and amongst many garnets of no worth, I have found the deep coloured gem, known amongst jewellers as the almandine. Crystals of tourmaline and beryl I have also collected there. Of the metals, iron is the only one which hitherto has been found; but of this there is no lack, and its uses being well known to the natives, they are perfectly familiar with various methods of smelting the ore and working it into hoes, axes, spears, arrows, and other implements Argillaceous rocks abound in the Yao country near the lake, and slate has been observed amongst the hills in the same district. The coal which was long supposed to exist on the Upper Rovuma and Lujenda turns out to be a kind of bituminous shale, with which is mixed a hard anthracite substance, which, on being subjected to the action of fire, is found to be scarcely combustible, and to leave more than 50 per cent of ash. Limestones are not abundant. Suitable clays for brickmaking and pottery are not wanting in most places. The grass, indeed, grows rank and tall in the rainy season, but three months after the rains have ceased, it is fired, and as one looks over the vast ranges and reaches of this great lone land, one sees clouds of smoke rising at distances of many scores of miles apart, betokening the scorching and burning of the dense tropical grass growth that is going on beneath them. For the most part this huge forest is scantily watered, but in the valleys and by the rivers the tame and wearisome vegetation of the long dull levels gives place to a far more pleasing picture. It is here that tall *Sterculiæ* rise with their white trunks, and stretch aloft their great branches, and with their sycamore-like leaves spread their deep and grateful shade. It is here that often the graceful borassus palm is found in all its columnar majesty, vying in its elegance with the graceful *Hyphæne,* and countless other varieties of river-side trees, which form so striking and pleasing a contrast to the tameness of the ordinary forest trees. Here, too, the ground is often carpeted by gorgeous flowers, many of which are unknown to science, and by rare orchids revelling in the steamy moisture of the valley, and the dark shades of this luxuriant river-side undergrowth. Here is to be found a lovely species of the genus *Impatiens,* which, within the last two or three years has found its way into so many of our hothouses, and is perhaps the finest balsam our gardeners have yet welcomed to England.

In speaking of the rolling plains, covered with thin forests of mimosa, I mentioned that they are broken again and again by gigantic masses of gneiss and granite. Very strange and weird are these great solitary hills, and of every variety, size, and shape. Now we find them rising sharp and sheer into the sky, and reaching an altitude of five or six thousand feet, with not a vestige of vegetation to break their hard, smooth sides. Again, we find them dome-shaped, like some great cupola of Titanic workmanship. More often still their sides are scarred and riven, and themselves are broken and uncompact, and from the interstices and crevices which form their cleavage, spring goodly trees and plants. Others, again, rise still less precipitously, can be easily scaled, and are more entirely tree-clad. In these are found caves, haunted often by large apes and leopards, and almost always by the timid hyrax and the sleek galago. But it is when a few of these great granite rocks are grouped together and valleys are found in and about them, the land sloping gently from them, and springs of water rising from beneath them, issue out in all directions to irrigate the subjacent land, that we find the Makuas have built, and settled, and cultivated, and are prosperous.

Just such a spot is Masasi—a district of this rocky country where nine years ago we planted our first colony of released slaves, composed as it is of four principal granite hills, with not a few smaller crags lying about them.

Masasi forms one of the most beautiful and healthy localities in the whole of this part of Africa. Makua villages are clustered thickly round the hills; the soil is fertile to a degree producing each year abundant crops of sorgum, maize, rice, sesamum, cassava, beans, yams, &c. We have introduced and cultivated with great success mangoes, guavas, limes, lemons, citrons, sweetsop, soursop, custard apple, cashew, and a number of other fruit trees almost unknown to Englishmen. We have attempted also the cultivation of coffee, cloves, and cinnamon; but, owing no doubt to the lack of perennial rains, we have hitherto failed with these plants. The cotton plant and the palma Christi are found wild throughout the district. As to the staple of the cotton, I should desire to express myself with caution in Manchester, but I have reason to believe that, with proper cultivation, Masasi cotton might be made a thoroughly marketable article. Tobacco, iron, and salt are also among the products of this favoured spot. In the course of my travels I have visited many other districts strikingly similar in character to Masasi, and I am confident that there are countless others, one and all of them affording ample scope for the ambition of the would-be colonist or settler in the Makua country. It is in such districts that the average European may enjoy a measure of health that is not possible anywhere on the coast of intertropical Africa, and it is in such districts also that, as I believe, there is at present a great field open for the mercantile enterprise of Great Britain. It is of what the country might produce, rather than of what in its present paralysed state it does produce, that I am speaking. The exports at present are few in number, those of sufficient importance to mention being ivory, gum copal, india-rubber, and orchilla weed.

It is in the Makonde country that the indiarubber vine is found everywhere, and perhaps there is no other district in East

Africa where it grows so luxuriantly and abundantly. Within the last ten years the trade in this valuable commodity has been steadily increasing, though, I am grieved to say, the natives have made it fit in with their slave-dealing proclivities, and buy slaves who are being carried to the coast with the proceeds of the india-rubber they sell there. When the maze of bushes and thorns is cut away, and the country cleared, the soil is found to be wonderfully prolific if planted with the usual cereals of the country, and it is a remarkable fact that even on this elevated plateau rice is found to thrive. My impression is that sandstone rocks are its natural home. The Makonde plateau towards its western extremity reaches an elevation of 2,500 feet above the sea level. The average thickness of the sandstone may be from about 800 to 1,000 feet.

Turning to the zoology of the country, I note that our district presents an interesting and extensive fauna. The lion, the leopard, and the hyæna roam the forests and infest inhabited districts, carrying off the poultry and goats domesticated by the natives. The East African lion would seem to be not so fierce an animal as his cousin of the south, for, save when he grows old and can no longer stalk his legitimate quarry, we seldom hear of his attacking men. Much the same may be said of the leopard, while the cowardly hyæna plays, as elsewhere, the part of a low scavenger. By far the most dangerous of our larger mammals is the two-horned rhinoceros, which in some districts, and especially in the Mavilia country, is very common. This animal seems to have singled out man for his foe, the very sight of whom seems to stir him to instant anger. There is no hesitation about the rhinoceros. No sooner does he see a man than forthwith he charges at him, and it is well if there be at hand some sturdy tree up which the man may make his escape from his ungainly but determined enemy. Amongst antelopes there are everywhere the wildebeest, or gnu, the sable antelope (*hippotragus niger*), the eland, the koodoo, the gemsbuck, the hartebeest. Amongst swine there are the *potamochœrus*, and the *phacochœrus*, or wart-hog. Zebras and quaggas, sleek and graceful, wander in large herds. The shrieking hyraxes—the well-known coney of Scripture—true to the biblical account of the little animal, "are a feeble folk, yet make they their houses in the rocks." The timid galago, closely allied to the lemur, of Madagascar, is also a very common animal. Elephants are rare but not unknown. Buffaloes are only less frequent than the eland and wildebeest, and form the favourite game of the hunter. Porcupines, and the scaly *manis* or pangolin, are amongst our smaller animals, and are decidedly not rare. We see enough of many of these animals to be acquainted with some of their strange habits, amongst which I know of none more interesting than that peculiar one, not unknown to naturalists, which the gnu practises; this eccentric animal being invariably found in herds, of from 20 to 30, accompanied always by a single zebra. I know of no explanation of this curious phenomenon, though, over and over again I have witnessed it. If I enlarged on this subject of the strange habits of some other of the representatives of the animal world in East Africa, my tales would, I feel confident, be listened to with such incredulity that it will perhaps be wiser to desist. Of domestic animals the goat is everywhere, while fine breeds of oxen are to be met with amongst the Nyassas on the Lake, the Gwangwara, and at Meto. Donkeys and sheep are unknown, except here and there in the coast towns. As to the prospects of trade, and the development of the resources and advantages of the Makua country, I may, in addition to the hints already thrown out, draw your attention to a passage in one of the recent papers communicated to the Royal Geographical Society, by Mr. O'Neill. "I have now," he writes, "walked over this country in every direction, and the more I see of it the better I am pleased with it. It is full of points of natural beauty, and I am convinced it will be found to be healthy and well adapted for the residence of Europeans. Shady and fertile valleys, watered by the purest mountain streams, and like the valley of the Lulia, situated at an altitude of between 3,000 and 5,000 feet above the sea-level, cannot be unhealthy, or fail to prove attractive to those who are devoting their lives to the civilisation of the natives of Eastern Africa, and who only seek suitable localities where they can preserve health to carry on their good work. No better position could be found than the Namuli hills, for the establishment of a central mission and sanitarium, from whence branch stations could radiate into the surrounding country, and I hope very many years may not be allowed to pass before some earnest workers be found to occupy this spot. It seemes to me that even for the purpose of developing legitimate commerce, trading stations might be advantageously fixed at such a position as this, on the Nalusne valley, at Nihoma or Etututi, or other points that a more careful examination may show to be suitable. Such a development will be slow and uncertain."

No account of this part of Africa will be complete without a distinct notice of the present state of the slave trade, and with regard to this subject I again quote the words of our active and zealous consul.

"A trade," he writes, "that has had a growth of two centuries and a half, commencing in the year 1645, when the Portuguese settlements of the West African coast fell into the hands of the Dutch, must, it is evident to all, have taken a strong hold upon the country and deeply stamped its impression upon the people.

Some efforts have been made of late years to prove that the slave trade in the Makua country and on the Mozambique coast is extinct; but unhappily the evidence of those few who have passed through the country goes to show that this is by no means the case. It is not what it was in its 'palmy days' of the latter half of the last century and beginning of this century, when, it being legalised and protected by the Government, all the colonists more or less engaged in it, to the exclusion of other more healthful industries; when bishops seated on a throne of marble blessed and baptized the gangs as they passed shackled to the shore for embarkation. But it still forms by no means an insignificant part of the trade of the country, and it is not too much to say that all the native chiefs deal more or less in slaves. Upon every journey I have taken into the interior I have met parties of slaves being brought down to the coast. Our missionaries upon the Nyassa, and in the district of Rovuma tell us that within the past two or three years there has been an augmentation rather than a diminution of slave-hunting, both east and west of the Nyassa, to satisfy the demands of coast slave dealers. In the year 1882 large parties arrived at Masimbwa, midway between Ibo and Delgado, carrying both ivory and slaves. And still more recently a caravan of 1,800 souls arrived in the neighbourhood of Angoche with about 500 large and many small tusks of ivory, and over 500 slaves. Upon the journey I have just accomplished (he writes in 1884) on two occasions runaways from slave parties sought my protection. Again, it is impossible to satisfactorily explain the depopulation of the coast belt, as compared with the interior districts, otherwise than by the desolating effect of an active and long-lived slave trade. These are surely sufficient proofs that the trade is not dead yet. The increase reported by our missionaries is due, there can be little doubt, to an increase in the agricultural industries of this coast which have caused a stronger demand for labour than existed a few years back. This slave trade to the Mozambique coast not only has proved, but also I believe will prove, a great obstacle to the development of this country. It forms a part of the traditions and present customs of the people. It occupies the attention of almost all traders from the coast to the interior; traders who hold a monopoly of the commerce of the Makua and Lomwe countries, and to whom the slave trade furnishes their greatest source of profit." Within the last few days there has been placed in my hands some hitherto unpublished remarks by Mr. O'Neill, bearing so closely on this subject, and of such vital interest in connection with the present discussion, that, fully believing Mr. O'Neill would grant me permission to bring them to your notice if it were possible to ask his leave to do so, I will read what Mr. O'Neill says: "Nine-tenths of the wars of Eastern Africa spring from the efforts necessary to satisfy the demands of the slave dealer, not from any love of fighting, from which indeed the mass of the people would gladly be spared. Whilst they are told that slaves form the currency held in highest estimation for the purchase of the cloth and other articles of which they stand in need, raids upon their neighbours will be organised, and wars continue to be made. But when they see that these things may be obtained with less difficulty and danger than through war, a great step will be gained towards ousting the slave dealer. The admirable situations of the interior lakes, their very shapes, indeed, and relative positions, cannot but greatly strengthen the beneficial effects of a regular trade from their shores upon that of slaves. In the present condition of the slave trade, the Nyassa and Tanganyika interpose themselves as gulfs of considerable extent between the demand on the part of chiefs who await the arrival of coast agents, and the main field of supply. Trading stations upon them would, therefore, be exceptionally well placed for competing with the slave dealers, and the latter may safely be left to the natural outcome of this competition. But trade is liable to fluctuations, and, unless working in a remarkably rich and varied field, to failure; for the demand for the few spontaneous products of the country may strengthen or weaken, or practically cease—and it will be very long before the wants of the black population so expand as to create a healthy and constant demand for imports of European manufacture. It would be otherwise if a steady flood of emigration were directed to the lake districts, and agricultural industries established there for the cultivation and export of produce for which the soil of the country is favourable, and by a population calling for the numberless necessities of civilized life. Then a sound balance would be established between importation and exportation, and a permanent and I hope, prospering colony, largely employing free native labour, and in which the settlers have a material interest in the well-being of their men, would take the place of trading stations moving hither and thither, according to the exigencies and requirements of trade." I do not like to quit this subject of the slave trade without placing it on record that the writer from whom I have so largely quoted, and whose authority on such a point cannot be called in question, is of opinion that it is entirely untrue to assert, as so often it is asserted, that the slave trade is fostered by Portuguese officials, or colonists in the Mozambique province. The fact that the Portuguese have so little power to take active measures in suppressing it, should be regretted rather than condemned, especially when we remember how we ourselves are to this day entirely baffled by the same problem. It is ungenerous, if not something worse, to accuse where we cannot substantiate; and it will be time enough to blame Portugal for not having put down the traffic when we are quite sure that we have swept Zanzibar waters clear of every slave dhow, and when we can allege, without fear of contradiction, that no slave caravans travel to the coast within the dominions of Seyid Barghash, who has given us free leave to take what measures we like to wipe out slave trading throughout them. If, for reasons which may have emerged in the account I have laid before you of the regions east of Lake Nyassa, there is a great future before this country, and if, as I have pointed out, it is a country which invites the enterprise and colonising energy of England at the present time, what, you may ask, have I to suggest with regard to what may be done in promotion of its further development? For a whole decade and more, Englishmen and Scotchmen have navigated the broad bosom of Lake Nyassa, and the beneficial influence exercised there by the various mission stations and the African Lakes Company are warmly recognised by the natives inhabiting the surrounding districts, far and wide. No other European nation is represented on those waters.

We have already posted one British consul within easy distance of the southern end of the Lake, and another has been nominated to fill his place, which was so sadly and so early vacated. Let these measures be followed up by still more important ones, and then will be realised, slowly it may be, but very surely, the lasting benefits we desire to see shared by this desolated and sore troubled country. We shall see the slave trade become extinct, and the wars that maintain it will be heard of no longer. We shall see the oppressed and hunted natives boldly coming down from their fastnesses in the hills, and causing the fertile valleys to swell with rich crops. Fresh industries will arise, new trades be developed. Tribes no longer decimated by slave raids will return to their pristine prosperity—nay, rather will make progress, thrive, and increase. The land will smile once more, and throughout the length and breadth of it there will be manifested the inestimable blessing of peace.

CANADA AND THE GREAT NORTH-WEST.

BY PROFESSOR W. BOYD-DAWKINS, M.A., F.R.S.

[Delivered before the members of the Society at the Salford Town Hall, on Monday, April 20th, 1885.]

I take it that two of the principal functions of our Society consist in the first place in encouraging new discoveries and in recording them when they are made, and in the second place—and in my opinion it is by no means an unimportant section of our duties—in bringing before the public what is already known. I am here this evening not to add anything new to our knowledge, but to put before you as shortly as I can the general impressions made upon my mind during two visits to the British Dominion of Canada. I should like to say that those impressions are mere impressions of a traveller passing swiftly on his way through a land which will be the home of millions of our race. We will begin our story on the shores of the Atlantic Ocean (Fig. 1) and work our way steadily westward, making out as we go the physical character of the country, till we arrive at the Pacific. The traveller, as he gets nearer and nearer to the coast of North America, and arrives near the straits of Belle Isle, some 2,234 miles from Liverpool, is, as a rule, in the summer, confronted by fleets of icebergs, and as many as forty have been counted in the straits which are bounded on the north by the inclement shores of Labrador. We will suppose that the traveller has run the gauntlet of the bergs and finds himself inside the great estuary of the St. Lawrence—one of the most magnificent estuaries in the world. The steamer takes him rapidly and swiftly a distance of something like 700 miles, until he arrives at the royal city of Quebec. (See maps.) As he goes up the estuary there rise on the northern shores the rounded and ice-worn hills which in the interior arrive at an altitude of 3,600 feet, and may be dignified by the name of mountains. If he happens to pass along the coast in the autumn he will be struck by the beautiful tints of the foliage, bright red and bright yellow, the yellow almost shining like gold, and the whole looking in the far distance like a brilliantly-coloured Turkey carpet. There are nestling in the borders of the lower St. Lawrence a village here and a church there, and here and there a clearing, showing what a very small impression man has made upon that vast country. There are small villages and homesteads studding the great rocky and inclement region north of the estuary, and far away to the north, beyond the inhabited border, there is a comparatively unknown country, a country abounding in lakes and rivers, and a country which in all probability in the long course of time will be the habitation of a great mining population of Englishmen. For although the climate there is intensely severe in winter yet the summer is exceedingly pleasant, and the minerals to be found are of great value. Gold, silver, and copper, are among the products, and I have no doubt that ultimately the mineral resources will be worked to their uttermost by the energy of our race. But suppose we cast our eyes southward. There we find a country which in a great many respects contrasts most wonderfully with the country to the north. Dense forests of pine extend southward, and as the traveller goes by steamer he can see the small clearings—rectangular strips of land—sweeping away from the estuary right up to the hilly regions of Acadia, which has been made famous in the story of "Evangeline." That region is inhabited for the most part by French people, and the population is by no means sparse on that side of the estuary. Churches are there, with their tall spires glittering in all the glory of tin—for I must tell you that tin spires and roofs are characteristic of French churches in Canada.

I do not wish to detain you upon this comparatively well-known ground, nor shall I say much about Quebec. The moment the traveller lands there he is struck by the fact that he has entered upon French ground; the population is French, French speech is everywhere, French hotels, French houses, and French surroundings generally. You might imagine when you are in Quebec that you are in Brittany or Normandy. And so you are, in a sense, in a part of the old France of the Monarchy. We must remember that the province of Quebec was founded by the French, and it fell to us by force of arms in the year 1739. The place then is distinctly French, and it is hard to believe that one is in an English dependency; but as a matter of fact there is no part of the British Dominions in any portion of the world where a more loyal and united people can be found, jealous for the honour of the Empire, than in this province. I am not going to say anything about the taking of Quebec, but I will give you one thing which struck me when I visited the field on which the fate of the British possessions in America was settled. On the heights of Montcalm, near a great column which records the spot on which General Wolfe fell, there is one of those buildings which are so characteristic of the English people, and which marks the law-abiding nature of our race—a most ugly and gigantic gaol. As a rule one of the first public buildings which Englishmen put up in a new country is a gaol. Seventy-four per cent of the population of Quebec is French, and a small proportion of it is English.

The route by rail from Quebec to Montreal passes through a low-lying district, abounding in woods. There are here and there clearings, but the woodland appears to be in excess of the clearings. When the traveller arrives at Montreal he notes this fact, that the French element is very much less as compared with Quebec. It is only 54 per cent as compared with the 74 per cent of Quebec. At public meetings the chances are equal as to whether a speaker will use the English or French language. But in Quebec, so far as I know, the odds are very much in favour of French only being heard. I need not ask your attention to the University, nor to the various educational bodies, or the magnificent public buildings, because the place, I have no doubt, is almost as familiar to many of you in this room as the city of Liverpool. Supposing then we hurry forward from Montreal to Ottawa, the centre of the Dominion. On the journey the traveller passes through the same low-lying country of forest, lake, and stream, varied by tracts of cultivation as before. The uncultivated parts occupy a far greater part of the country than the cultivated. Ottawa is a city built upon a hill, and the hill is crowned with one of the most admirable and beautiful groups of public buildings that it has ever been my pleasure to look upon. Ottawa is the centre of the British Dominion, because of the rivalry that existed between the French population in the east and the English population—using the term English in the widest sense—in the west. They have not chosen Toronto, Quebec, or Montreal, but have selected what was a small lumbering town and made it their capital. An outward and visible sign of the French element in the population, as contrasted with the English, is the fact that the Parliamentary debates in the Canadian "Hansard" are printed in French and English. For purposes of debate it is absolutely necessary for members to know both the English and French languages. Thus in the Canadian Parliament a man is supposed to possess a knowledge which certainly is not demanded of our Imperial representatives in this country. I think it exceedingly improbable that some of our members would be able to carry on the debates with the same persistence in two languages as they now do in one.

I must pause for a moment to say a word about the principal trade of Ottawa. I have used the term "lumbering," by which I mean the cutting down of trees, their reduction to logs, and their introduction into the sawmill. Ottawa is the great centre of that trade, and I for one cannot help being struck by the waste of timber. I may say here, that so far as I have been through the forests not merely of Canada, but of the Eastern States, I have never seen any big forest trees alive. The forests are being rapidly destroyed, not merely by being cut down, but by the fires which are being continually caused through the carelessness of the people who are "lumbering." I cannot help thinking that that is a very important fact, and one which is quite worthy of the notice of the Legislature of the British

Dominion. Trees are being destroyed most ruthlessly, and the result will be that in a comparatively small term of years there will be scarcely any big trees left in the whole of the Eastern parts of North America. Another point in regard to Ottawa is that there exist in the neighbourhood valuable deposits of phosphate of lime (apatite), in which a large and important trade is being developed. It was not a little interesting to me to go some distance up one of the wonderful rivers, which form the highway in that part of the world, and examine some of the phosphate mines near Buckingham, and it was still more interesting to me to see the same material in process of manufacture at Widnes, in Lancashire. There is an important trade between this district and the mineral districts of Ottawa.

From Ottawa to Toronto the train takes us leisurely through woodlands and small clearings, but as we get near Toronto the clearings increase in number and the woodlands diminish. In Toronto we are in the midst of a population mainly composed of English and Scotch, and we leave behind the French element so predominant in Eastern parts. I may sum up the general origin of Toronto in these words. It was founded by a body of energetic Scotchmen, who have not only shown their shrewdness by establishing this great city in its present important position, but have also shown the value which they attach to education by assigning large blocks of land for the endowment of higher education. The result of all this is now shown in the magnificent University which exists there—an university which is open to all and free from all religious or sectarian prejudice. It is a distinctly secular institution, and, so far as I know, it is the very first secular teaching university which has been established in this world, being in this respect the predecessor of Owens College and the Victoria University. And in that University is another thing which is well worthy of our attention, namely, that the various religious sects have each of them their own special place of education. For instance, there are two distinct colleges belonging to the Church of England; a college called by the name of John Knox; a college bearing the name of Wycliffe; a college for members of the Baptist persuasion· and St. Michael's College which represents the Roman Catholic element. I mention all these things to show you that Toronto is a very advanced place. The buildings may be compared to those of Bradford or Liverpool, and the public library is an admirable institution, and better than that in the city of Manchester. But we must turn west.

From Toronto, as far as the borders of the great lakes, there is the same class of scenery as before. We note the same rocky hummocks covered with trees, with sparse clearings, till we arrive at Owen Sound, on Georgian Bay, on the shores of Lake Huron.

A word with regard to these great lakes. The Canadian Dominion (see maps and section) is one network of great lakes, connected together by great rivers, and so much is that the case that it is possible to get with a canoe from the region of St. Lawrence almost everywhere, south, into the Mississippi, north, into Hudson's Bay. These lakes are of enormous extent, far greater in area than you can gather from a mere examination of a map. Lake Huron, for instance, is something like 21,000 square miles in extent; Lake Superior about 31,000 square miles; Lake Michigan some 22,000 square miles. I give you these figures in order that you may realise the enormous scale of these immense sheets of fresh water. When you are on one of the magnificent steamers taking a journey, you might imagine yourself to be upon the sea, for sometimes there is no land in sight. Swiftly and rapidly the traveller is taken on a steamer which provides comfortable and easy accommodation for at least 600 passengers, and which, after crossing Lake Superior, lands you at Port Arthur, on Thunder Bay. Port Arthur is a distinctly mining community, and, as far as that goes, you might be in Colorado, Texas, Arizona, or any other mining state of North America. The place consists of a series of stores, drinking saloons, and wooden houses, in which the natives live. As might reasonably be expected in such a district, there are magistrates, a mayor and corporation, and a whole *posse comitatus* of officials to keep a place where mining operations are going on in proper order. In this district enormous quantities of silver have been obtained; gold has also been discovered, as well as native copper. Speaking of silver reminds me of the present position of the silver question. The Canadian Pacific Railway is now nearly finished north of Lake Superior, through a highly metalliferous region, and connecting it with Toronto and the East. As a geologist, I feel justified in saying that a large quantity of silver will be thrown upon the market when this district is fully opened up, which will affect the relation of gold to silver, now such a burning question in commercial circles. (See map.)

From Port Arthur to Winnipeg, a distance of 429 miles, the scenery is the same as before, rocky hummocks, morass, and woodland, varied by the most picturesque lakes, by a complicated network of streams, and by little cultivation of any sort. This region hitherto has been an impenetrable barrier to the immigrant. When the railway through the district is completed, it will be one of the most important political and social factors in the Dominion. By the piercing of the barrier by the railway a land of Goshen will be opened to the British emigrant—the fertile land of the prairies. The whole of the country (see section, Fig. 2), some 1,500 miles wide, from the Atlantic Ocean to a point a little east of Winnipeg, is one

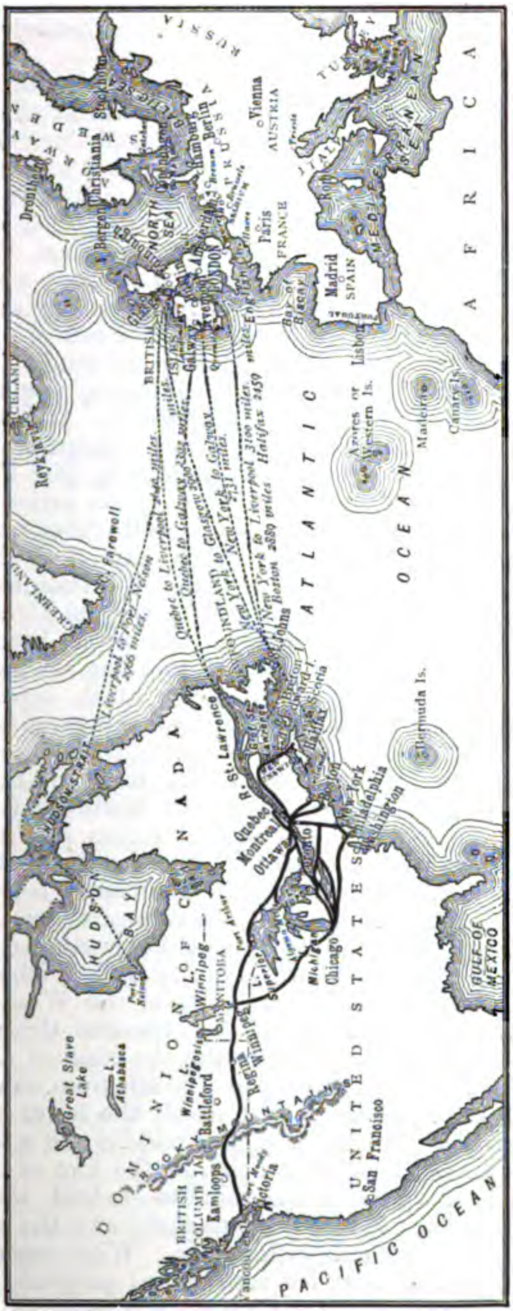


FIG. 1.—SKETCH-MAP FROM THE NORTH SEA TO THE PACIFIC OCEAN.

tract of woodland and dense undergrowth of conifers, maples, and other trees which have usurped the place formerly occupied by the giants of the forest.

On arriving at Winnipeg the traveller is met by a totally different class of scenery. Winnipeg stands at the junction of two rivers, the Red River and the Assiniboine. The great plains extend westwards for 839 miles to the foot of the Rocky Mountains. The streets of Winnipeg, like Chicago, are all straight, and run at right angles to each other on a dead level, and are lined with stores and large buildings. Winnipeg is famous not merely for its rapid growth, from a cluster of huts round Fort Garry (where Lord Wolseley earned his spurs) into a city of 25,000 souls, and the centre of government for the North-west, but also for its mud. The mud is so extraordinarily tenacious that the railway engineers have invented the special name of "gumbo" for it. It is a material which sticks as fast to the spade as so much treacle.

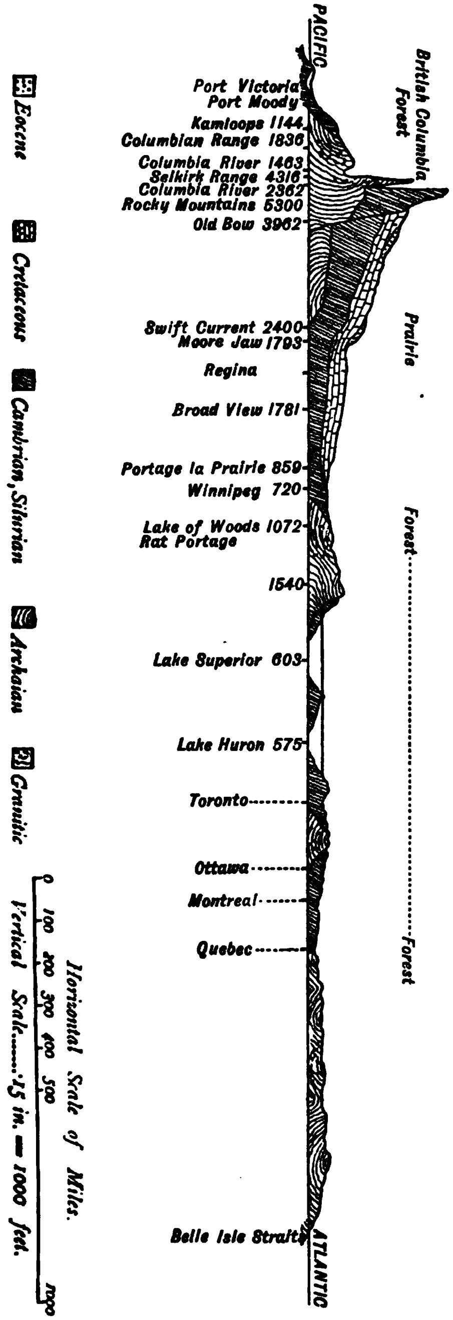
The geographical position of Winnipeg, (see Fig. 1 and map) standing as it does close to the great series of lakes, is of very considerable importance, because they are navigable by the large steamers, which can find their way from Winnipeg down to the shores of Hudson's Bay to Port Nelson. And this leads me to a very important point. At the present time the authorities of the British Dominion are not merely alive to the necessity of breaking, by means of a railway, through the barrier of forest which separates the civilisation of Europe and of the east from this great fertile land of the West, but they are also alive to the importance of opening out a trade route by way of Hudson's Bay. At the present moment there are exploring parties in Hudson's Bay to see what kind of a winter there is in that region, and it is by no means improbable that the hopes of the Canadians will be realised and a new trade route (Fig. 1) established between Port Nelson and Liverpool. This is an enterprise worthy of all encouragement, since it will open out the great corn lands of the West to the dense populations of the British Isles.

I have spoken of the corn lands of the West. As we push westwards from Winnipeg we traverse three distinct plateaux (see Fig. 2), evry much like the plain of Lancashire and Cheshire, and like it, composed of alluvium, sand, gravel, and boulder clay. There is first of all the lower prairie or alluvium, nearly horizontal; a higher middle, and a third more irregular plateau, still higher, ranging to the foot of the Rocky Mountains. It is by no means rainless—indeed, when I was there, it was regular "Manchester weather," and the country in some places was covered with water. With regard to the capacities of that country for agricultural purposes, the mere impressions of a man flying through the country, as I was

FIG. 2.— HORIZONTAL SECTION THROUGH THE BRITISH DOMINION

MAINLY ALONG THE LINE OF

THE CANADIAN PACIFIC RAILWAY.



travelling through it, are not of any particular importance in themselves, but I have had an opportunity of verifying certain facts which are to be found in books, and which have been alleged by other observers. I believe that there is an enormous and almost unlimited field for agricultural operations. For instance, my friend Professor Macoun pointed out that there was no less than 150 millions of acres of good land available to the agriculturist and to the herdsman, between the Rocky Mountains and the region of Winnipeg. That region is remarkably well fitted for growing wheat, and the samples of wheat are magnificent. The scale on which wheat growing is beginning to be carried on may be gathered from the case of the Bell Farm, near Regina. Here I saw 8,000 acres of land under wheat, and Major Bell was preparing this year (1884) for 11,000 acres. The only thing necessary to convert the prairie into a wheat-producing arable district is to plough up the surface of the soil and put in the wheat. For how long the land will stand this without becoming exhausted is an open question; but quite long enough, in my opinion, to ruin the wheat growers in Britain. In this over-stocked country of ours, where the rents are high and the taxes heavy, it is absolutely impossible for the British farmer, farming on a small scale and after the fashion of his ancestors, to compete successfully with the great wheat-growing country of the North-west. He has to choose between two things, either to give up growing wheat in this country, or to migrate to those lands where it can be grown with advantage. The sooner he makes his choice the better will it be for him. If he will not choose either alternative, he can only look forward to ruin. You may reasonably ask, "How much land is taken up?" It seems to me very little as compared with the vast tract, but I have no doubt whatever that within the next fifty or sixty years it will be occupied by a large population. I have spoken of wheat growing, but I may add to that the growing of barley, of various kinds of roots, such as potatoes, turnips, and various vegetables, with cucumbers, pumpkins, and cauliflowers. Some of the biggest and finest cauliflowers that I ever saw in my life were in the Agricultural Show at Winnipeg. The Mayor, in his address of welcome to the British Association there, said that one cauliflower was big enough to feed the British Association; but I am glad to say that other food was given to us.

With regard to another most important element in farming, the growing of live stock, permit me to remark that from Winnipeg westward there is an enormous extent of land, providing nutritious and admirable grasses suitable for cattle. At the present time, as you go by railway westward from Winnipeg in the direction of the Rocky Mountains, you see herds of domestic cattle taking advantage of these great pastures. But where are the buffaloes? In books you will get an impression that you have simply to go out into this region in order to see countless herds. Now I have been twice across the prairies, through their pastures, but I never had the good luck to see a buffalo in the flesh. I have seen plenty of their bones, for over vast tracts white objects catch your eye, which mark the spots on which these animals have been killed within the last few years. In some places along the line of the Canadian Pacific Railway you find a great accumulation of bones, which has given its name of "Pile o' Bones" to a place now known by the polite name of Regina, which is the head-quarters of the fine soldierly mounted police, and is dignified by the possession of a stout wooden gaol. The existence of the buffalo is not only represented by their bones but by something which seems to me more mournful. For hundreds of miles the grass land is covered by their "runs"—like large hare-runs—which are mute witnesses of the former existence of countless herds.

I have said nothing hitherto about the Red Indian and the half-breed. At Winnipeg I fell in with a remarkably fine example of the latter in the person of the present able Premier of Manitoba. Further to the west there are large numbers of Indians of various tribes. I should like to say a word in favour of the Red Indian. Most of us hear so much said against him that it gives me great pleasure to record testimony on the other side. I dare say most of you have noticed in the newspapers of the last few days that a considerable amount of excitement has been felt in Canada with regard to the action of Crowfoot, the Chief of the Blackfeet. He is the most powerful chief in that country, and the question is, now that the half-breeds under Riel have risen against the authorities, what the action of Crowfoot will be. He has telegraphed to the Governor of Manitoba that he would not think of breaking his word to "the Great Mother;" that is to say, he pledged himself to remain at peace with the English people, and that he would not allow his braves to go out on the warpath. They would remain quietly cultivating their farms (for they have taken to farm cultivation). The following striking incident illustrates the noble character of Crowfoot, which happened to come before my notice, when I had the pleasure of making his personal acquaintance on the prairies during the meeting of the British Association in Canada.

At Gleichen, a parade of Blackfeet Indians had been organised for us. Some thirty or forty came galloping up on their ponies, dressed in coloured blankets and gay with beads and feathers, with rifles slung on their backs, and formed in line. The grouping was most impressive. The line of Indians, headed by their war chief in scarlet uniform, and wearing a hat with two horns, apparently made of feathers; the squaws and children, with vermilion painted faces, squatting on the ground; the prowling dogs; the members of the British Association on the railway bank in the foreground; the rolling prairie in the middle distance; and the snowy Rockies rising like a wall on the horizon—formed a picture not easily to be forgotten. In front of the line stood Crowfoot, the principal chief, in a blanket striped brown, black, and white, a flannel shirt, a kind of waistcoat, and a pair of goloshes—a spare, powerful man of about sixty, with long black hair spangled with grey, parted in the middle and hanging over his ears, and ornamented with the head of a bird, probably an eagle. His forehead was low, his nose aquiline, eyes dark hazel, and mouth large and clearly cut. While I was talking to the interpreter, who stood beside him, Professor Macoun suddenly asked the interpreter to ask him whether he had seen him before. Crowfoot looked keenly at him, and a flash of recognition came into his eyes. "Ugh, ugh," he said, and made signs which expressed his pleasure. It appears that six years ago, Professor Macoun when travelling on the prairie went to Crowfoot's camp, which consisted of 150 lodges, and brought with him four cartloads of supplies. He went to that place because he knew that he would be safer there than outside. He cooked his food and slept, and prepared next morning to go without the loss of anything. To his horror he found that he was in the midst of men dying of hunger. In one lodge one man lay dead; in another three were dying. There was not an ounce of food in their camp, and the temptation of obtaining food was so strong that they would have taken it had it not been for Crowfoot, who would not allow it, principally on the ground that he had made a treaty with the English, and would rather die than break it, and partly also because Professor Macoun had trusted him. Professor Macoun supplied them with food, and the long-expected buffalo came that very day. Such a tale of simple heroism as this is worthy of being recorded of a people doomed to pass away before us, or to be absorbed into our race.

But we must return to the consideration of the conditions of life in this region so far as they relate to water and the seasons. Water may, in my opinion, be found almost everywhere in the region between Winnipeg and the Rocky Mountains, if not on the surface, by the usual process of sinking. The quality of the water, wherever the stream is a running one and has an outlet, is perfectly good, but where there is no outlet the water is alkaline. As to the seasons, winter begins at the opening of November, and the frost is sufficiently intense to penetrate nine feet into the ground, according to Major Palliser. Winter lasts until about the middle of April, when it gives place almost in a day to spring, and the hot sun overhead rapidly carries the thaw deeper and deeper into the ground. Spring consists of two months, April and May, and then comes summer from June to the middle of September. Autumn follows and extends to the beginning of November, when the winter sets in. The time for putting seeds into the ground is either just before the beginning of the winter frosts or at the first break up of the frozen ground. The winter sowing is the best.

From the foothills at Calgary, 839 miles west of Winnipeg, the Canadian Pacific Railway rapidly winds its way up the pine-covered Kicking Horse Pass, over the "divide" at 5,300 feet above the sea (see map and Figs. 1 and 2), into British Columbia, a land covered with dense forests and abounding in minerals. Huge conifers, sometimes ten feet in diameter, are by no means uncommon.

In the western part, then, of the country there is a tract of forest (see Figs. 1 and 2, and map); in the eastern portion, from the Atlantic as far as Winnipeg, there is also a great tract of forest, and in both these forest regions are valuable minerals. Between them is a land which ought to be that of the farmer and of the herdsman. It is perfectly clear that it is destined to become a most valuable heritage to the English race. As far as area goes, the Canadian Dominion constitutes something like 40 per cent of the whole British Empire, which will give you an idea as to its territorial importance. If we look at its past condition we see that it was a country given up to the Indian hunter, who led the life, practically, of a beast of prey. It is a land which is capable of producing an enormous quantity of food and an enormous amount of wealth. At the present time, the middle and western regions especially are as yet scarcely under the dominion of man. It is perfectly true that miners have been at work in British Columbia; and it is true that farmers are represented by sparse communities here and there. It seems to me that in the future the great home of agriculture will be found in the middle of the great prairie land of the Dominion, and breadstuffs and other produce raised here will be distributed to the mining communities on either side, east and west. The reason why this region has not been before freely open to emigration is due to the existence of the great barrier of forest and morass on the eastern side. That barrier may be said to exist no longer. I look forward to the great prosperity of this region, and to the time when the pine-clad, glacier-crowned Rocky Mountains, which bounded my westward travels in the Dominion, will look down on plains studded with villages and homesteads and yellow with the gold of harvest; to the time when the domestic cattle will be as numerous as the now vanished buffalo have been, and when fields of waving corn will replace the glowing colours of the Gaillardea, the Aster, the Helianthus, and the other wild flowers of the prairie.

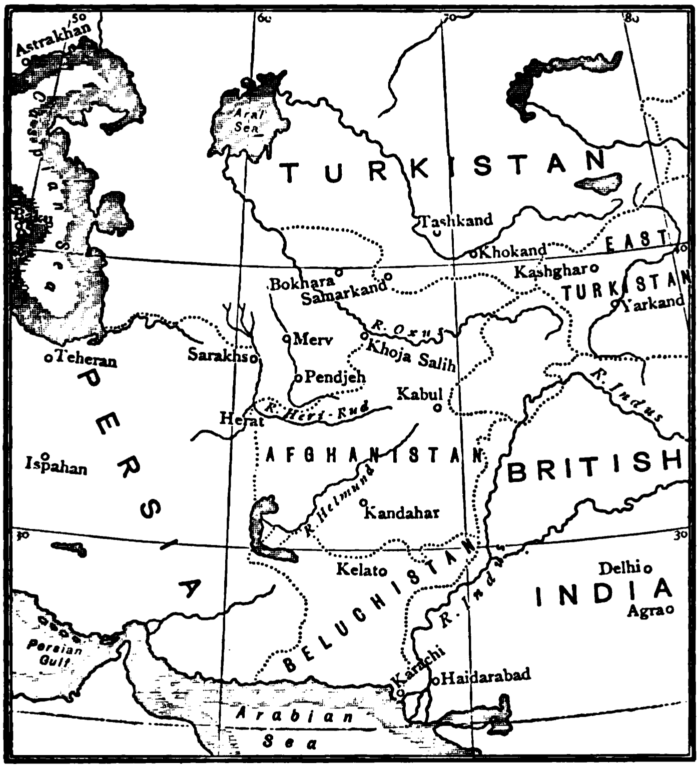
NORTHERN INDIA AND AFGHANISTAN.

BY MAJOR-GENERAL SIR FREDERIC J. GOLDSMID, C.B., K.C.S.I.

[Delivered before the Members of the Society at the Manchester Athenæum, May 19th, 1885.]

IN accepting the invitation of the Manchester Geographical Society to read a paper on "Northern India and Afghanistán," I could not but feel that, for the treatment of this particular subject, there were many more practised lecturers to whom the Council might have addressed themselves. At the same time the consciousness that my attention had been fixed upon the history, politics, and geography of the region above-mentioned during many years of residence and travel in India and the far East, and many months of residence and travel in Persia and Turkey, gave me some kind of warrant for the task. It seemed to me that, in any case, I could string together such items of the scattered information now abundantly available as would be best fitted to illustrate the subject selected for consideration this evening, and supplement the compilation with the results of personal knowledge and experience. More time than I could command would have been requisite to prepare a strictly scientific address. I have, therefore, ventured to put before you that which it is to be feared might, in a scientific point of view, be considered desultory and discursive, calling the attention of those who may feel disappointed on this score to the admirable paper of Captain Holdich on the Geographical Results of the Afghan Campaign, read before the Royal Geographical Society in London in December, 1880. But "Northern India and Afghanistán" are broad geographical expressions, and it will be well to define the interpretations I propose to put upon them. Instead of wandering towards Tibet and the Eastern Himalayas, I shall confine myself on the present occasion to the North-West of India only, dwelling especially on those tracts connected politically and geographically with Afghanistán, which country will be taken in its entirety. This arrangement will, I venture to hope, meet the wishes of the Society, and falls in, as it were, with the naturally prevailing tendency to examine more closely one of the momentous questions of the day, sometimes called the Russo-Afghan, sometimes the Anglo-Russian difficulty.

First, then, reversing the order of the title, let us see what constitutes the territory of our ally Abdu-r-Rahmán, and note its boundaries on all sides of the compass. The frontier on the north is the most perplexing of the four; for neither Káfaristán nor Chitral admit the Amir's authority, nor can Kunduz, Badakshán and the Pamir be reckoned permanent parts of consolidated Afghanistán. From the region of the rise of the Oxus to its elbow at Khoja Sálih, the Afghan claim to the tracts between the river and the Hindú Kush, Kuh-i-Bábá, Sáfid Kuh and Paropamisus (indicating the mountain barrier generally from East to West), is more or less vague and undefined, except where supported by actual possession. Balkh and Khulm, Maimana, Andkuhi and Shibarghán are, however, names hitherto understood as representing districts and strongholds belonging to Afghan-Turkistán. Russia, on the plea of ethnological affinity with the subjects of her newly-annexed lands, would demand allegiance from the inhabitants of the plains, up to the very foot of the ranges protecting Herat and the capital, and thus drive back the boundary line by some two degrees of latitude. But such argument could, with no show of reason or justice, be applied to places the Amir's right to which is undisputed.



SKETCH MAP OF WESTERN ASIA.

This tract of ill-defined and uncertain possession, which may be roughly included within 62° and 72° meridians of E. longitude, contains many chiefdoms and political divisions other than those already mentioned. Little was known of any until about half a century ago, when a band of politicians and explorers, varying in ability but one in energy and enterprise, started forth from the heart of India—then without Panjáb, Sind, or a single station on the Indus—pressed forward into Afghanistan and, making light of the physical barriers of the Hindu Kush and its offshoots, emerged upon unknown but very interesting ground—that now attracting the attention of European statesmen as the probable scene of a settlement all important to British India, because it involves the determination of a precise line which Russian encroachment may not cross. These useful pioneers were men in the Indian services. Among them were particularly distinguished—Alexander Burnes, Connolly, Leech, Lord, and Wood of the Indian Navy (commonly called Oxus Wood). Shortly after, followed James Abbott and Richmond Shakespeare, both across the Paropamisus into Khiva: the first-named is the only survivor at the present day. Their operations —though not made known by special correspondents or the drawings of illustrated journals, thus engaging the interest and sympathies of fashion and the British public—must have roused to renewed action the great Power overhanging the Central Asian belt on the north; for what has resulted? Simply this: In those days Astrakhan and Orenburg were its outposts to the south; and the latter town is now a thousand miles in the interior of Russia.

Of the places which I have specified, Káfaristán merits the fuller notice. It is a very remarkable country and contains a very remarkable people. Some fifteen years ago it was stated that no European or other alien had been known to have entered Káfaristán and returned; so that all information then obtained regarding it was second-hand. In 1885, so far as Englishmen are concerned, the situation remains almost the same (with one notable exception to which I will allude by-and-by): we have gained little or nothing in knowledge of its geography. Our officers are still refused admission to its precincts. They are invited to visit it, but difficulties supervene and the invitation has no practical effect. All that we learn regarding it is by stealth or from outside its boundaries. Of its inhabitants the information is a shade more satisfactory, for some of these are met with in India or other accessible localities. Mountstuart Elphinstone had seen one in 1815; nearly twenty years later, Burnes had found them in Kabul; Sir Henry Rawlinson, later still, had seen them repeatedly in the same city; and in more recent years, Dr. Trumpp, a learned German missionary, had conversed with three Káfirs at Peshâwar. In 1878, two deputations of the same people came to see Major Biddulph at Chitral, and invited him to their country, but he was unable to go; and in 1879, Colonel Tanner accepted the invitation of certain influential Káfirs to visit them as a guest, but was compelled from ill-health to abandon his projected expedition. From the last-named officer's enquiries we gather that the population of Káfaristán may amount to 100,000; that they are entirely independent of the Amir of Kabul as of all Muhammadan rulers; that their country is impregnable, and occupies a position on the westernmost side of the Yaghistan, which domineers all mountain passes between the Oxus and Indus basins. It is at that point where the chain of the Hindu Kush strikes the extremity of the Himalayas[*]. The Káfirs are called "Siyáh-posh," a compound Persian word signifying the wearer of a black garment. Whether it be from their worship of idols, or whether to mark their distinction from the surrounding Muhammadans, I cannot affirm, but the term "Káfir" itself applies to infidels of every description throughout the world of Islam. For a time it was supposed that they were fair-skinned, with blue eyes, light hair, and other European characteristics, but those seen by Dr. Trumpp were "in all respects like the natives of the Upper Provinces of India, of a swarthy colour; dark hair and dark eyes." The learned doctor qualifies the description somewhat by adding, "Only their faces were more reddish, which may be easily accounted for by their liberal use of wine, for when Colonel Edwardes asked them what they wished to eat and to drink they answered 'a *mashak* (skin) of wine every day.'" He thought that their features betrayed an unmistakable Hindu origin, and that if they dressed like Hindus they would not be distinguishable from the inhabitants of the plain country. This last recorded opinion, however, does not appear to be that of experts generally. Sir Henry Rawlinson goes so far as to say that "the most beautiful Oriental lady he ever saw was a Káfir slave." He further relates that this fair one, "by loosening her golden hair, could cover herself completely from head to foot as with a screen."[†] The origin of the inhabitants of Káfaristán is a moot question, and one of considerable interest, both in an historical and ethnological sense, but its discussion belongs to other than geographical societies. More to the purpose is it to note its physical inaccessibility, a circumstance which has enabled its people to remain comparatively independent of surrounding influences and to refuse ingress to any Muhammadan neighbour. It is barred in on all sides by mountains and difficult country, and though its loftiest outer barriers may have been traversed by Timur the Tartar nearly

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[*] Proceedings of Royal Geographical Society (London, 1881), p. 278.

[†] It need scarcely be said that "golden hair" would not be accorded to a Hindu beauty even in the pages of a penny English novel or sensational French romance.

500 years ago, it possesses abundant natural inner defences, and there are no signs of modern Timurs to disturb the present inhabitants. Some notion of its security may be formed when it is understood that among the many passes of the Hindu Kush, which runs north and and north-west of Káfaristán, that of Kawak is more than 13,000 feet high; that the mountain range which separates it on the east and south from the Chitral and Kunar rivers shows six registered altitudes none less than 13,500 and one more than 16,000 feet,; and that on the south-west and west the figures are 14,030 and 14,550.

But we must not overrate, as many seem disposed to do, the effectual seclusion of the Káfirs of Káfaristán. We are told by the best authorities that some of them have become converts to Muhammadanism, and, according to Colonel Tanner, writing within the last six or seven years, their country is continually subject to Afghan encroachment, except from the north, or side protected by the Hindu-Kush. "Raids on a large scale," he says, "are constantly made upon them, partly to wrest from them their land, partly to secure their women as slaves, and partly by fanatical Muhammadans on religious grounds." His limitation of their *habitat* to a tract bounded on the north and north-west by the Hindu-Kush, to the east by the Hindu Raj, and to the south and south-west by the Ram-Kund range and district of Laghmán, will serve as a general description, but a detail of the high lands immediately enclosing their territory on the west is yet a desideratum. Moreover, Sir Charles Macgregor can only reconcile the statement of two authorities that three rivers (the Alishang, Kao, and Chigar Sarái) flow through it, with that of a third who mentions but one (the Chigar Sarái), by the supposition that all the country inhabited by the Káfir race is confounded with that of the independent tribes only. The disposal of this discrepancy is of material importance, as a reference to the map will show.

Allusion has been made to one notable exception to our failures in acquiring a knowledge of Káfaristán. It is found in the brief but brilliant record of an expedition undertaken in May, 1883, by Mr. McNair of the Indian Survey, read before the Royal Geographical Society in London the following December. That gentleman—apparently inspired by the before-expressed opinion of Sir Henry Rawlinson that, to penetrate the mysterious region aforesaid, the proper course would be to keep north of the Kabul river, go by the entrance of the Swat valley to Dir, then cross the Chitral valley and make for the north-eastern passes south of the Hindu-Kush—achieved his end by adhering to this programme with tolerable closeness, and assuming a well-considered disguise. The final descent into the much-desired land was tedious but full of adventure. Under the sun's rays the upper crust of the snow had melted. Mr.

McNair seated himself on the ground, raised his feet, and at the same time gave his body a reclining position. Then, to use his own words: "a jerk and we were off, following in each other's wake, bringing ourselves up every now and again by embedding our feet in the snow. By this means we got down almost to the base of the hill in a very short time, and on arriving at the Ludhe villages were well received." He stayed a few days only, debarred by the weather from outside explorations, but able to glean some interesting particulars on the place and people. According to the data obtained, Káfaristán embraces 5,000 square miles: is bordered on the west by the Alishang river with its tributary the Alingar, and on the east by the Kunar river and a tributary, up to the pass called Dura—the northern and southern frontiers being as before described. Its population is estimated in excess of 200,000 souls, twice the number computed by Colonel Tanner. There are three main tribes, each of which has a dialect of its own; these tribes are subdivided into clans. The country is picturesque, densely wooded and wild; the men are short of stature, but "of fine appearance, with sharp Aryan features and keen penetrating eyes; blue eyes are not common, but do occur; brown eyes and light hair, even to a golden hue, in combination are not uncommon." The two extremes of complexion, fair and dark, or rather pink and bronze, are observed, without change in the cast of features. But many of my hearers to-night have probably seen the accounts of Mr. McNair's little expedition, which, though disclosing but a glimpse within the threshold, is yet replete with interest, suggestive of new theories, and cannot fail to give an impetus to renewed explorations in the same quarter.

I have dwelt so long upon Káfaristán that the remaining states in the North-east of Afghanistán must be dismissed in a few words. Chitral, the contiguous state of the highland group, containing the upper portion of the valley of the Kunár (a river already mentioned), has been explored by the indefatigable agents of the great Trigonometrical Survey of India; and many years ago the native Pandit Manphul was able to put together a few scattered fragments of its history. It has been divided into Upper and Lower Chitral. The people are independent, and the ruler's authority in the North extends to Yassin in the direction of Gilgit and Lower Tibet. Unlike their Kafir neighbours on the West, the Chitralis are mostly Muhammadans, but their civilisation is not of a high order, and they have long had an evil reputation for selling into slavery such of their subjects as they consider infidels and heretics. The principal town is said to be Darosh or Drūsh, possessing, according to Major Raverty, 2,000 houses; but Chitral, or Karkháro, is the most conspicuous on the map, and McNair calls Daroshp (evidently the same as Darosh) a "village." Accepting then Chitral as the capital, we find it situated 71° 55′ E. longitude and 35° 50′ latitude, about 110 miles north of Peshâwar in British India. To its north, and barely 25 miles distant, is the mountain of Tirach Mír, the elevation of which is deduced trigonometrically by Colonel Tanner to be 25,246 feet. McNair notes that this marvel of loftiness stands on a southern spur from the main range of the Hindu-Kush, and towers 9,000 feet above the mean height of the dorsal ridge. One of the entrances to India from Turkistan is by Chitral, but through a country of immense physical difficulty. Of the three passes traversed we are told that two are closed during the winter, and all are covered with perpetual snow; moreover, the traders from Badakhshan have to slide down the Chitral side of the Nuksân Pass on leathern sheets. Ponies are tied by their feet and rolled down.

Crossing the Hindu-Kush from the south we come to the land of the Upper Oxus or Jihún, to Wakhan, a dependency of Badakhshan, and the Pamir—and, moving westward, to Badakhshan and Kunduz or Kataghan. The geography of these is of a complicated character. They are lands of rivers, valleys, and mountains, the last named merging into a vast plain reaching with more or less variation in breadth to the eastern boundaries of Persia. Wakhan and Badakhshan were prominent names in the diplomatic discussions held between the governments of England and Russia some ten or twelve years ago; and a portion of the first and the whole of the second were claimed as tributary states of the Amir Shir Ali. The history of Badakhshan is mixed up in modern times with that of Kunduz, the chief of which province, one Murad Beg, held sway over the two territories by force of arms. After Murad's death, the governor of the neighbouring town and district of Khulm succeeded to his power, but in 1859 the three governments were brought under the Afghan dominion, and a kind of suzerainty established, which has been kept up, with intervals of revolt, to the present time. Though we have spoken of the plain country in Kunduz, it must not be inferred that there are no high mountains west of that district, between the Oxus and the Hindu-Kush. Almost as far west as Khulm—about half-way between Kabul and the town of that name—there is a pass called the Kara Kothal, which is estimated at more than 10,500 feet.

The map which I have borrowed to illustrate the subject of my paper this evening was prepared by General Walker, the late Surveyor General in India. As regards its delineation of the Northern Frontier of Afghanistân, I can, I am sure, find no better exposition than that given by the author himself when lecturing between two and three months ago at the Royal United Service Institution. Having had the honour of presiding on that occasion, my attention was especially called to the aptness of his remarks on this particular section of country. He says:—

> "The principal physical features of this region with which we are at present interested are, first, the river Oxus which, from its sources in the Pamir tableland down to Khoja Salih, forms a portion, and much the longest portion, of the Northern boundary of the kingdom of Kabul; and secondly, the great ranges on the Southern border of the Oxianian basin. These ranges constitute a boundary between the Afghan Commonwealth and Afghan Turkistan; following their crest lines we see the Hindu-Kush striking from North-east to South-west, for a distance of some 450 miles, from the Southern borders of the Pamir tablelands to the passes between Kabul and Bamian; it then merges into the Koh-i-Baba range. which, after trending Westward for some 90 miles, throws off great spurs to the Northwest and Southwest; these spurs bend round and then run parallel to the main range which still preserves its Westerly direction; all three ranges sink into insignificance or disappear altogether as they approach the Hari-Rud river, where it flows through the plains which constitute the borderland between Herat and the adjoining provinces of Persia; the central and main range is the Paropamissus of the Greeks; it is the highest of the three, and generally covered with snow, thus it is called the Safid Koh or White Range by the people of the country; the Southern is called the Siah-Koh or Black Range; the Northern is the lowest of all, it is called the Tir-band-i-Turkistan Range, from its position on the border of the Turkoman plains."

General Walker added that a very noticeable feature in Afghan geography was the fact that the principal rivers of the country—and he instanced eight—radiated from the Kuh-i-Baba, the range to which reference has just been made, and here shown on the west of the Hindu Kush.

We have now come to the locality of the Russo-Afghan affair of 1885. Whatever were the instructions issued to the British Commissioners, we know that their attention was in the first instance given to the delimitation of a frontier, from a point on the Oxus, specified as Khoja Salih, to the Persian post of Sarakhs on the left bank of the Tejend. This river may be called the lower Hari-Rud, which, it should be noted, is, like the neighbouring Murghab, running in a parallel direction—included in the eight streams radiating from the Kuh-i-Baba. I pass over the events which have obstructed progress, as out of the scope of discussion this evening. The most recent geographical intelligence on the subject is that the new frontier will start from the north of Zulfakâr, on the Hari-Rud, trend in an easterly direction to Chaman-i-Bed, on the Kushk, a feeder of the Murghab, and thence pass to the south of Panj Deh, and reach the Oxus at Khoja Salih along the margin of cultivation.

As I have elsewhere stated, had we only taken the opportunity of exercising a legitimate interference two or three years ago—when Russia had captured the Turkman stronghold of Giuk Tepe, and entered into a new boundary treaty with Persia—we should have spared ourselves much after trouble, expense and annoyance. To use stronger expressions might be construed into talking politics; but the Geographical Society will understand the geographical advantages of avoiding, if possible, that a boundary line should be run through two parallel neighbouring streams a few miles before they practically expend themselves in the sandy desert, and distant from three to five hundred miles from their respective sources. As to the words "legitimate interference," it may not be generally known that more than fifty years ago the Governments of Great Britain and Russia declared themselves to be "equally animated by a sincere desire to maintain, not only the internal tranquillity, but also the independence and integrity of Persia;" and this declaration has, to all intents and purposes, been repeated again and again, in moments of abnormal cordiality, up to quite a recent period.

Connected with the Northern Frontier of Afghanistán are two cities which, though now united under one ruler, have, more than once since the foundation of an Afghan monarchy, been divided into separate chiefdoms, or principalities. These are the capital Kabul, and Herat—the four hundred* and odd miles between which, in a direct course, are so difficult of traversing that the traveller prefers availing himself of a circuit of more than six hundred miles, through Kandahar. Our agents and diplomatists, have been on several occasions to Kabul, a city, entered by British troops, both in 1839 and 1842—the second time in retaliation for the wholesale massacre which was the ultimate result of its earlier occupation. Situated mainly on the right bank of the Kabul river, at the western extremity of a spacious and well-watered plain, partly enclosed by a semicircular range of hills, it has its streets and markets, gates, gardens, and shrines; but its mosques and public buildings are not of any mark, and its *hammams*, or baths, are uninviting. To the east and south-east is the Bála Hissâr, or Upper Fort. Of late years it has again been the scene of the murder of a British Envoy, an event followed by a new occupation, happily terminated by the memorable march to Kandahar of Sir Frederick Roberts. Quite at the western side of Afghanistán is Herat, a place which has for fifty years maintained high distinction in the Oriental political world. Whether from its position in a strategical sense, its historical repute, or its connection with a river and valley which constituted it the "granary" of the regions around, it matters little; it became known as the "Key to India," a title which has preserved it inviolate in the hands of the Afghans—thanks to the British Government and its officers. History may, perhaps, relate that a fear of Russia, for whose ends Persia was but an instrument, was the real cause of this our action. If so, the present situation is a remarkable instance of the irony of fate. In any case, belief in its value to India has inspired our statesmen to that degree that the preservation of Herat from foreign influences has been the one solitary "fixed idea" of England's policy in the East; and the success which has attended our quarrel with Persia for grasping at the supposed "key," has apparently put out of sight the original cause of jealousy regarding it.

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* Measured as the crow flies, supposed to be 450. In like manner the actual marching distance from Herat to Kabul, by Kandahar, is 685 by the shorter, and 716 by the longer of two routes.

The Afghan boundary on the West begins at the latitudinal point on the Tejend, which marks the limitation of the Russian advance, and is carried on along the bank of the river in its name of Hari-Rud to Tumán Agha. From this place it runs due south across the mountain range, overtopped by the conical peak of the Sang-i-Dukhtar, and through the edge of the salt desert of Khurasan; marking a considerable encroachment effected by Persia during the last century. Again, crossing the ranges which intersect the desert from the north-east, the line, inclining somewhat to the west of south, is continued to Cháh Sagak (the "dog's well"), an elevated spot on the old caravan route between India and Persia, as far as which the Afghans have the right of pasturage. To the west is the Province of Káyin, the governor of which has the supervision of all Persian territory to the Helmand river. The surrounding country bears the significant name of *Dasht-i-na-Umaid*, or "Desert of Hopelessness," and indeed nothing can be more dreary and desolate. For eight miles south east, eight miles due east, and 24 miles south, in all about 40 miles, the line is carried to the *Siyáh Kuh* or "Black Hill," on the border of the district of Neh Bandan. Here begins the line of frontier, determined by the Sistân Arbitration of 1872, by which the main bed of the Helmand became the boundary between the two states up to the dam at Kuhak, where the waters were diverted to the westward. Below this point both banks of the river were given over to the Afghans, and a vast extent of partly desert and partly inundated country placed between the litigants. Subsequent surveys have thrown new light upon the large and little-populated tract to the far south of Sistan; and the intervention of the substantial though barren acres of a third state, Baluchistan, suggest the propriety of a defined Afghan-Baluch, as well as Perso-Afghan Frontier.* The general character of the western or Persian boundary from Herat to Sistân is mountain and desert. At the Lake of Sistân, there is an open gate, as it were, into the valley of the Helmand and Kandahar.

Before describing the southern and eastern limits of Afghanistán, interesting to us as connecting the country more especially with India, I will pause for a moment and say a few words on Boundary Settlements between Oriental States. It has been my lot to be engaged on two of these, first as Commissioner on a

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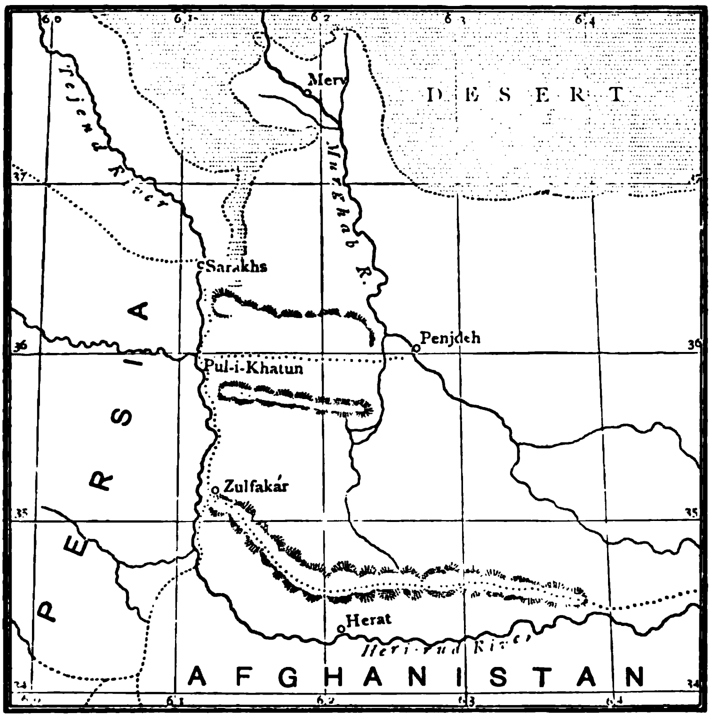
* The description of this particular boundary is contained in my article on "Modern Persia" in Vol. XVIII. of the Encyclopædia Britannica.

Perso-Baluch, and secondly as Arbitrator on a Perso-Afghan Frontier. It must not be supposed that questions such as these are disposed of as they would be among European States or by European Commissioners only; nor that detailed instructions, drawn out in a London office according to some favourite official form and popular precedent, are sufficient for the guidance of agents in these matters. It is not impossible that these may be proved wholly impracticable from first to last. You have, for instance, to take your litigants, in the person of their individual representatives, to the line of litigation. When you have reached a certain fixed point, one declines to go except on impossible conditions, and unless you have the telegraph at your disposal, or other means of compulsion, your whole work is marred. Or again, one litigant refuses to accompany the other litigant to the spot on which your instructions are to hear the arguments of both. The respective Commissioners decline to meet each other, and you are left to your own devices to settle the matter. Both these cases illustrate actual facts. I do not mean to say that there is not a way of arriving at a settlement, but that way cannot be the intended way, nor is it certain that it will meet with authoritative approval. It must, at the best, be an expedient; and expedients in Frontier Settlements have not the advantage of well calculated measures; nor do they always exhibit the same regard to geographical requirements. The long line of frontier, therefore, which you see on this map from Sistân to the sea is an outcome of difficulties such as I have hinted at, but which, to describe in full, would require an immense Blue Book—a kind of literature more instructive to statesmen and diplomatists than entertaining to the general public.

From Sistân the southern boundary of Afghanistan runs conterminously with that of Baluchistan, up to the Indian frontier at Sakhi Sarwar—at first due east, then south-east and east, then forming a kind of polygon round Quetta, making an abrupt dip to the south and south-east, returning by an irregular curve to the north and north-east, and ending in a semi-circular sweep on the precise line of latitude (30°) from which it started, passing through some 10 meridians of longitude. The most important Afghan city in the south is Kandahar, situated on the Arghandab river, an affluent of the Helmand, which it joins at a distance of about 70 miles, after receiving the waters of other tributary streams. Its nearest point on the Baluch frontier is in a south-easterly direction, just above Quetta, or about 100 miles as the crow flies. In a direct line, due south, it is about 20 miles further, the whole intervening tract from the Arghandab being desert. This fact is especially worthy of remark, because it has been maintained by opponents to the retention of Kandahar after the late war, that such a step would have been tantamount to armed occupation of the country. Irrespective of the district, the city itself is almost a frontier outpost, and the presence there of a British force under the sanction of the Amir of Afghanistán need not have met with lasting opposition on the part of the people.

I have mentioned Quetta. Originally a small town, with mud wall and citadel, it has risen to importance during the last few years as a garrison of English soldiers and *sipáhis*. Capital of the valley of Shál, a district which belongs to the Khan of Kalát, ruler of Baluchistan, and on the road to the Province of Sind in the north-west of British India, it is at this moment an outpost of almost unappreciable value. Owing to the judgment and foresight of our local political officers, the occupation of this place during the last Afghan campaign was a peaceful measure, in strict accordance with old treaty stipulations, and attended with no complications whatever. The Khan is our faithful and trusted ally, and well aware that the ægis of our Protectorate forebodes no annexation nor in any way injures his interests or those of his country. Moreover, our presence in this part of Baluchistan should prove rather a boon than an annoyance to



SKETCH MAP from MERV to HERAT.

the inhabitants, who profit from the local market here created. Quetta is distant from Kandahar 142 miles. One range of hills, the Khwoja Amran, intervenes. To surmount these there is a choice of two passes—neither of great difficulty, like those in Northern Afghanistán—but that called the Khojak is the better known, and was adopted in 1878, as in 1839-42, for purposes of military transit. On the south, our outpost commands three separate passages into India—the Bolan Pass, the Mulla Pass, and the road through the Province of Baila to Karáchi, a seaport which at one time seemed to threaten competition with Bombay. The Bolan, like the Khojak, is the route with which English soldiers and diplomatists are most familiar. It is a short sixty miles in length, and comparatively easy; but the railway (completed to Dádur in 1880) is being pushed on, and will, doubtless, extend, ere long, to Quetta itself. I should very much like to talk to you about Jacobabad and Shikarpur, the towns first reached in this direction when crossing the Indian frontier, but time would fail to do justice to the subject. All I can do is to say a mere passing word for each. Jacobabad, then, is named after its founder, the late General John Jacob, one of the most distinguished of Indian officers, whose name is as well known on the Sind frontier, which he so efficiently protected, as that of his contemporary, Sir Bartle Frere, in the Province of Sind, over which he exercised so enlightened and beneficent a rule. It was a wretched, waterless hamlet, in the midst of desolation, when first known to Englishmen in 1838. It is now, and has for some time been, a flourishing cantonment, shaded with fine trees, and on the bank of a noble canal. Shikarpur, on the other hand, is an old native city, once dependent on Afghanistan, and containing many interesting remains of Afghan dominion. The conquest of Sind by Sir C. Napier, in 1843, placed it, with the district around, at the disposal of the British Government. A collector and magistrate was appointed according to custom in like cases; but a representative of the former native administration was retained, in the person of a splendid old half Persian, half Afghan, named Muhammad Hussain. I can remember the constantly recurring difficulty we had in keeping him within the bounds of English law and custom. The easy gaol life of our convicts was to him a grievous mistake. He preferred a more summary mode of justice, such as cutting off a hand or an ear; nor could he comprehend the object of discarding torture, or goading to confession. These ways of his own people were to him the very keystones of government, for to discover a theft he looked upon as the main end of official existence—in his estimation, no triumph of statesmanship could bear comparison with that.

The Eastern Frontier of Afghanistán from the point already mentioned—Sakhi Sarwár on 30° line of latitude—up to the fort on the Swat river (about 34° 20′) where the line runs to the north-west and Káfaristán, is wholly conterminous with the Panjáb division of British India. But the slopes of the mountains which drain to the Indus, and at the foot of which this frontier is found, are but a small section of the broad tract comprehended within the region of the Sulimán Kúh. Authorities differ on the character of the mountains bearing this name. According to MacGregor, the Suliman Range, taking a southerly direction from the Allah Kuh ridge between Kabul and Ghazni, throws off many spurs towards Kandahar, Quetta, and the Helmand, which constitute an important western branch. It is self-evident that from these more than one formidable impediment might be formed to an invading force. Others,[*] however, describe the Sulimán as "a mighty mountain barrier containing in its northern section two ranges which increase in number as they run southwards, till at its southern extremity . . . there are no less than twelve distinct ridges, like battalions in columns of companies at quarter distance. The ranges increase in height from east to west, the highest called Mihtar Suliman or Kuh-i-Siyah being snow-capped in winter." At a distance varying from 10 to 70 miles from the frontier line runs the river Indus. The three principal passes from the Panjáb into Afghanistán are the Khaibar, the Kuram, and the Gomal. Sir Edward Hamley, an officer especially competent from ability, study and experience to form a correct judgment on the strategical value of these, considers the first to be the fittest for the passage of troops, giving as his reasons that it is the shortest, the easiest, the best supplied with water, and connects directly the most important points. The Kuram, no doubt, presents difficulties in the heart of the Afghan country, though not in the first part; and the Gomal is comparatively practicable, but circuitous.

It must be borne in mind that, looking at the lands west of the Indus, almost the entire belt of frontier on the Indian side is lowland, and on the Afghan side mountains and high tableland. So also, as a general rule, is it with Sind and Baluchistan, or the whole region of the Lower Indus. There are exceptional interventions of spurs from hill ranges; but Sind is a land of plains, much as the more favoured Panjáb. Besides the Passes mentioned, however, there are minor channels of intercommunication pierced by many and various mountain streams. The beds of these may be used as outlets to the Indus valley, or means of ingress from that valley into the yet imperfectly known highlands.

To sum up. We may accept, as a rough but fair statement,[†] that Afghanistán (justly called by Captain Holdich an outlying province of the great Central Asian plateau), is bounded on the north by Turkistan, east by Hindustan (called also by Captain Holdich a much depressed promontory of the Central Asian plateau jutting out southwards into the ocean), south by Baluchistan, and west by Persia; that in the direction of east and west it stretches over 600, and north and south over 500 miles; that a large portion consists of alternate rocks, mountains, and deserts; that its rivers partake of the nature of torrents, being nearly all fordable during the greater part of the year, but that the Kabul and Helmand are noble streams; that its climate is, in the higher lands, very cold, and in the plains intensely hot, though from its general elevation it is colder than Western Asia and much colder than Southern Asia. The area is estimated at 225,000 square miles: but this estimate if sifted, might require amendment or explanation equally with that of length, owing to the doubtful status in the North. It would be well perhaps for thc careful historian to divide the country into Afghanistán Proper and Outlying Afghanistán—the latter being what has been elsewhere called the land of the Afghan Commonwealth. Especially notable, as geographical features, are the mountains belonging to the Hindu-Kush system in the north and north-east, the high Sulimán range dividing it from India in the East, and the valleys and mountains on the south near the Kalát border.

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[*] Major Raverty and Sir C. Wilson. See *Geographical Magazine* for October, 1878, page 258.

[†] As the following three paragraphs are mainly from a paper prepared by myself some years ago, I have not marked the portions literally reproduced with inverted commas.

Afghanistán, as a consolidated kingdom, dates from less than 140 years ago, when it was founded by Ahmad Shah Abdali. This chief, taking occasion to break off allegiance to Persia on the death of his acknowledged sovereign, Nadir Shah, and failing to influence the succession in that country, retired to Kandahar with his numerous followers, and constituted that city the capital of a new state, comprising also within its limits Kabul and Herat. He died after a glorious reign of 25 years, remarkable for several invasions of India, the last of which might have given him the throne of Delhi had his ambition so willed. He was succeeded by his eldest son Timur, who transferred his capital from Kandahar to Kabul, and reigned 20 years. On Timur's death, in 1793, his third son, Shah Zamán, became king, but his own weakness and the turbulent rivalry of his brothers caused internal revolution, the fall of the dynasty, and eventually the splitting up of the consolidated kingdom into chiefdoms, of which Kabul, Kandahar, and Herat were the most important—the last being at one time quite independent of the other two. For a long series of years the country was a prey to family feuds and party rebellions; and, in 1839, British troops crossed the frontier to support a certain candidate to power. That step was pregnant with disaster, and although the massacre of our troops at Kabul was avenged by an after expedition of no small repute, it must be generally admitted that the prestige of England suffered for a time from the nature of her interference in the affairs of her Asiatic neighbour. In 1879 we again invaded the country and reoccupied Kabul. Later still, another of our envoys was murdered and more fighting ensued. Finally, Afghanistán was evacuated by British troops, and a new Amir, Abdul Rahman, acknowledged. Like his predecessor, Shir Ali, he has visited and experienced an honourable reception in British India, and like all his countrymen, he has accepted our presents, and will continue to accept them so long as it is worth his while to do so.

The origin of the Afghans is a moot point, and involves an inquiry of much ethnological interest. What affinity, if any, they bear to the Arians and Arachosians whose territories they occupy, or whether they are all or for the greater part settlers brought in by conquest or circumstances, is a question well worthy of close examination. Before the successful invasion of Persia in 1722, their nation had been, according to an author of the period, "unknown to Europe, and scarce known to Asia, where it lies in a corner." When they had overthrown an illustrious dynasty of Persian kings, they became suddenly notorious; but their notoriety had no permanent honour. In a very few years, and after two short incomplete reigns, they were found incompetent to perform the task taken in hand, and hurled back ingloriously to their own country. Their tribes are numerous, and tribe distinctions are kept up with scrupulous care.

Many high authorities believe in the Jewish descent of the Afghans; others argue against it. Common physical characteristics are urged in support of the proposition; dissimilarity in language is brought forward in opposition to it. In the introduction to a well-known Muhammadan history the Afghans are mentioned so far back as in our seventh century. Another Muhammadan author affirms that they are "Copts of the race of the Pharaohs," many of whom "became converts to the Jewish faith . . . others stubborn and self-willed . . . leaving their country, came to India, and eventually settled in the Sulimání mountains, where they bore the name of Afghans." Others, again, describe them as Armenian Christians transplanted from Shírwán, west of the Caspian. They themselves are supposed to boast of their Hebrew origin, and to claim as their ancestor Saul, the son of Kish. A wild, warlike people, brought up in an atmosphere of deceit and suspicion, it is difficult to surmise what subjects they would prove under a civilised government; but, for my own part, I should certainly prefer the Persians as soldiers or servants, and as companions.

REVIEWS AND LITERARY NOTES.

IZVYESTIYA VOSTOCHNO-SIBIRSKAGO OTDYELA IMPERATORSKAGO RUSSKAGO GEOGRAPHICHESKAGO OBSHCHESTVA. [“*Proceedings of the East-Siberian Section of the Imperial Russian Geographical Society.*”] *Tome* XV., *Nos.* 3-4, 1884. *Irkutsk*, 1885.

IT is worth while calling the attention of the merchants of Manchester to the fact that, whereas the present is the first year of the existence of a Geographical Society in this metropolis of foreign trade, the far-off Asiatic city of Irkutsk, in Siberia, on the borders of the Russian and Chinese Empires, has published the *fifteenth* volume of the transactions of its local Geographical Society. In addition to a very complete set of meteorological tables for the months of July, August, and September, 1884 taken at the Irkutsk Teachers' Seminary, the part of these proceedings which has just been forwarded to us contains the following interesting papers: (1) “Rides in Mongolia during 1883,” by Dubrov, with a plan of a Chinese town in the valley of the Biltüs; (2) “A new and short route from Selenginsk, Troitzkosavsk, and Chita, to Lake Baikal,” by E. Putilov, with a sketch map; (3) “Information concerning the doctrine of Witchcraft (Shamanstva) among the Yakuts of the circle of Yakutsk,” a most curious and, to the folk-lorist, extremely valuable paper by N. P. Pripuzov. The importance of the *Shaman* or sorcerer among the Yakuts is well known to those acquainted with the ethnology of this part of Siberia, and is alluded to by several geographers.

L'ESPLORATORE: GIORNALE DI VIAGGI E GEOGRAFIA COMMERCIALE. *Organo ufficiale della Società d'Esplorazione Commerciale in Africa. Anno* IX., *fasc.* iv. *Milano, Aprile,* 1885.

BOLLETTINO DELLA SEZIONE FIORENTINA DELLA SOCIETÀ AFRICANA D'ITALIA. *Anno* 1., *fasc.* 1 *e* 2. *Firenze,* 1885.

THESE two reviews forwarded to us by African exploring societies in Florence and Milan testify to the remarkable development of interest in the Dark Continent which has been awakened in Italy. The former of the two periodicals contains quite a number of interesting papers, first and foremost are those by Dr. Schweinfurth, on the Rora Asghedè, a part of the Abyssinian regions situated in the territory of Habab, about 14° N. lat., which contains a succinct description of that country and its natural products, of which the two most important seem to be the olive (large forests of which exist), and the *Euphorbia Kolqual.* What trade this region does is mostly through Massowah, but Dr. Schweinfurth believes that the country wants thoroughly opening up, and gives some useful advice to those who have any idea of trading in this rich district. P. Longo contributes a paper on “The ancient cities of the Tripoli district,” fixing, after M. Vivien de St. Martin, the identity of several of the ancient cities recorded by Strabo, Mela, Ptolemy, and others, with modern places. Padre Fiorentini writes two letters from the Niger basin; and there are, of course, several short articles on Massowah (or Massaua, as the Italians write the name of this Red Sea station).——Massowah and Beilûl again occupy, as is only natural, a considerable space in the “Bollettino” of the Florentine section of the African

Society; and the two papers by A. Mori and U. Valle respectively, contain a good deal of useful information, historical as well as geographical. Massowah is one of the hottest spots on earth. Signor Mori quotes an Arab proverb: "Aden is an oven; Jeddah a furnace; Massowah is hell." Still, he asserts, the climate is not unhealthy. Professor Licata gives an interesting summary of the history of Italian action in the Red Sea; and Ugolino Ugolini-Bargioni has a brief paper on the Hovas of Madagascar. We also get two diplomatic documents: the convention between Italy and Mohammed Henfari, Sultan of Houssa, and the treaty with King Menelik II., of Shoa.

A NATURALIST'S WANDERINGS IN THE EASTERN ARCHIPELAGO.

HENRY O. FORBES, F.R.G.S.

There has just been published by Messrs. Sampson Lowe, Marston, and Co., under the title of "A Naturalist's Wanderings in the Eastern Archipelago," a most fascinating book, which will be widely read in this and other countries. The author is Mr. Henry O. Forbes, a sketch of whose career will be of general interest at the present moment. This young missionary of science, whose sets of Herbarium and collections of insects and birds have been purchased for nearly every European capital, is the son of the Rev. A. Forbes, of the Scotch Church, and younger brother of Mr. G. S. Forbes, Under Secretary to the Government of India, Calcutta. He was born in January, 1851, and educated at the University of Aberdeen, but owing to an accident which deprived him of the sight of one eye, was unable to graduate. He resumed medical study in Edinburgh, attending the lectures of Professor Huxley, but owing to a threatened affection of the other eye was again forced to give up. Mr. Forbes then went to Portugal for a period, where, in the rich flora of that region, he had his taste for natural history developed; and shortly after his return to England, prepared for a sojourn in the Indian Archipelago, encouraged by Mr. Carruthers of the British Museum, and Mr. A. R. Wallace, the celebrated explorer of that region, by whom the then unknown land of Timor-laut was pointed out as a most promising field. On landing in the East an opportunity early presented itself to him of visiting the Keeling Islands, the coral group that was made famous by Darwin's visit to them in the *Beagle*, and from the examination of which he based the long accepted theory of coral island formation. The object of this journey was to record what change had taken place since Darwin's visit; but Mr. Forbes was unexpectedly able to find fresh facts that tend to support the more widely applicable theory of Murray and Agassiz, which differs considerably from Darwin's. Returning from the Keeling Islands, Mr. Forbes visited the west and south-west parts of Java, and, while making botanical and zoological collections, instituted a regular series of observations on the fertilisation of orchids. From Java he proceeded to Sumatra, travelling from the south of the island to the margin of the Jambi territory, but, prevented by the hostility of the people of that independent Sultan from proceeding further north, he turned eastward down the Great Palmebang river, which he reached after a sojourn in the country of eighteen months. During this time he visited the high plateaus of the Barisan range, the central line of mountains in Sumatra, whose people are mostly Pagans, and retain the old customs of the country. He also visited the magnificent volcanic peak of the Dempo, and, camping on the crater, watched its workings; from its margin he gathered the magnificent new *Vaccinum* or whortleberry, which has been named after him. Besides these, he made the acquaintance of the curious forest-living tribe of the Kubus, whom he sketched, and of whom he obtained the unique skeleton now in the British Museum. Returning to Java in the beginning of 1882 he married, and, with Mrs. Forbes, left for Timor-laut, in the far east of the Archipelago, an island bearing the worst reputation of any in the region. There they remained for at least three months, cut off from all connection with the outer world. They gained the confidence and affection of the people of the village, but the jealousy of some of the inhabitants of neighbouring villages was excited by the gifts received by the former in exchange for fowls and fish, and on one occasion Mr. Forbes narrowly escaped a plot to kill him. When their food supply was all finished, the febrifuges all done, and Mrs. Forbes terribly reduced by the violent fever that she uncomplainingly suffered, and by the anxiety of the constant dread of a night attack, the steamer called for them, and brought them back to Amboina in the Moluccas. From thence, after a rest of a month, employed in packing up and sending away the fine collection of insects, ethnographical objects, crania, and of birds, which contained twenty-five species unknown before to science, they started off for Timor, another most unhealthy island. This island Mr. Forbes traversed, got together a fine botanical collection, sketched the people, and obtained a large amount of new ethnological information. His wanderings here, however, were interrupted by the serious illness of his wife, who left alone in her hut—which was attacked and robbed in the night—was deserted by all her servants, and eventually rescued by the Portuguese Governor, Major de Franca, who conveyed her to Dilly and summoned her husband. They were conveyed by the first steamer to Batavia, and thence home, to enable Mr. Forbes to make full preparations for an expedition he had planned for the exploration of New Guinea. Thither he was compelled to take his departure before the publication of his book, which will give the public a better idea than is possible in a necessarily brief sketch of the labours of one of the most accomplished and earnest naturalists of this or any period. The book is welcome on its own account; it is welcome also because it will enable the uninitiated to understand some of the difficulties under which Mr. Forbes has to pursue his inquiries, and because it affords the clearest and most convincing evidence that the appointed leader of the expedition to New Guinea possesses the qualifications indispensable for the task he has undertaken. No one who peruses the vivid account of the wanderings of Mr. Forbes in the Cocos-Keeling Islands, in Java, in Sumatra, in the Moluccas and Timor-laut, in the island of Buru, and in Timor, will shrink from adopting the conclusion, not only that his heart is in his work, but also that he knows how to set about it—how to endure the most severe privations, to overcome apparently insuperable obstacles, and to adapt himself to the most trying circumstances. Cultivators of orchids in England will derive valuable information from this book. Mr. Forbes cites a number of instances which, in his opinion, go to show that the rule that "the flowers of orchids are fertilised by the pollen of other flowers" is not so universal as has been supposed. "It is to be feared," he says, "that too often the interesting cases of flowers observed to be cross-fertilised by insects have been recorded, while those of flowers otherwise fertilised have not been mentioned, so that the law of cross-fertilisation in orchids has been in danger of being unduly magnified, from the absence of evidence on the other side." When he was in Buru, Mr. Forbes crossed the river Wohauyau. A halt was made for lunch, and the Aléfurus, the natives with him, took the opportunity to rub their limbs and bodies till they were quite blistered, with the leaves of a very sharp stinging nettle, "to take away their fatigue." At Timor he was told how the natives prepared for war. On the eve of war messengers are sent to every corner of the kingdom to summon every man who owes allegiance to their Rajah. Then they assemble on a hill "each with a fowl in his hand in which to read his fate, until the whole of the hill is full." They "sit together in silence, each man dressed in his war attire, with his gun on his shoulder, his sword by his side, and his spear in his hand." The preparations are, altogether, of an impressive, if half-savage character. Ladies, reading the extract from the diary kept by Mrs. Forbes when she was alone in Timor, will wonder how she lived through those terrible days, and will, perhaps, rejoice that their husbands or sons are not explorers. The great merit of the book is, of course, that it is an account, not merely of the adventures of Mr. Forbes, but of his discoveries. People who have the scantiest knowledge of science will not find it dull; people who know a great deal about science will find much that will afford them food for reflection and not a little for controversy. The value of this remarkable narrative of travel and exploration is greatly augmented by the numerous illustrations, which are singularly good. They are from the author's sketches, the descriptions being by Mr. John B. Gibbs. The frontispiece is a fine coloured picture of Mrs. Forbes' Honey-eater, and in addition to the illustrations there are several excellent maps. Lord Derby, in a letter to the High Commissioner, General Scratchley, has approved of the expedition to New Guinea, although he has refused to render it any pecuniary assistance. Her Majesty's Government have authorised General Scratchley to contribute "from the funds under his control, should he find that the Australian Government, who contribute to the cost of the Protectorate, approve of his doing so." The Geographical Society of England subscribed £250 towards the expenses of the expedition; the Geographical Society of Australia has subscribed £500, and proposes to pay all the expenses of the Australian members of the expedition who will join Mr. Forbes.—*London Figaro.*

Bulletin de la Section Géographique de Brest.—Some interesting remarks of the language and the morals of the inhabitants of the Congo are made, and also on their idolatory. Mahometanism is extending in the country, whilst Christianity is not progressing.

Bulletin de la Société Géographie de l'Est, Nancy, reports the travels of Dr. Crevaux, and of M. Thouar, who found proof of the death of Dr. Crevaux, and accomplished the task which Dr. Crevaux had made his mind up to do. M. Thouar started from Santiago (Chili), passing through Arica, Tacna, and Tarija. After having ascertained the fate of Dr. Crevaux and his companions, M. Thouar went through Chaco, an immense plain, which he was the first to traverse. After thirty-two days' privations and fatigues he arrived at the capital of Paraguay, Assumption.

Bulletin de la Société de Géographie de Rochefort contains a very interesting study on the adoption of a first meridian, by M. A. Bellot, a French naval officer The author reviews rapidly the different meridians of every time and nation since Ptolémy. Mons. Bellot concludes that the convenience of having the same first meridian is not a sufficient reason for its adoption. As to the *unification* of the hour, M. Bellot thinks it would be a very good thing to have the same hour for international connections, but that in practice every spot must keep its own hour.——A congress will meet in the month of October, 1885, at Washington, for the purpose of determining this question.——The same paper publishes a report on the scheme of Colonel Roudaire for the construction of an interior sea in the Chotts of Algeria. with a good map of the country.

Chronique Géographique Mensuelle, edited by Mons. Leon Bigot, of Paris, corresponding member of the Manchester Geographical Society, announces the formation of the Manchester Geographical Society.

Bulletin du Musée Commercial (Bruxelles) announces the formation of the F. Colin Deutsch-Afrikanishes, in Hamburg, and publishes the list of the German factories on the West Coast of Africa.

Bulletin de la Société de Géographie de Paris (No. 12) publishes the report of M. Angelvy's travels in the basin of the Rovuma. M. Angelvy, an engineer in the service of the Sultan of Zanzibar, found a very important vein of coal, but far from the coast (180 miles). His Highness the Sultan of Zanzibar will build a road or a railway, which may perhaps be lengthened to the Nyassa.

La Société Neuchâteloise de Géographie, Neuchâtel, intimates its formation, and desires the exchange of publications with the Manchester Geographical Society.

Basel.—A new fortnightly periodical appeared in Basel on June 1st, entitled *Geograpische Blätter*, edited by Dr. Rudolf Hotz. The object of this publication is to serve as a popular organ for the extension of geographical knowledge. As there is scarcely a corner of the earth to which the Swiss do not find their way, it is likely to have a large staff of contributors.

Cyprus.—Mr. Stanford has just published a trigonometrical survey of the Island of Cyprus, under the direction of Captain H. H. Kitchener, R.E., assisted by Lieutenant S. C. A. Grant, R.E. The map is drawn to a scale of one inch to one statute mile = $\frac{1}{63360}$. The hill features are drawn in chalk, and printed in a separate colour. The map shows the vineyards, forest of fir, and other trees: gives block plans of the towns and villages, shows the aqueducts, springs, wells, monasteries, ruins, and other particulars. It measures, when all the sheets are mounted together, 12ft. 6in. by 7ft.

Central Africa (The Congo, Zambesi, and Lakes).—A communication, being a review of the books published on the subject of Central Africa, and containing a summary of the history of the developement of discovery in that part of Africa, will be given in the next Journal.

REPORTS OF MEETINGS, SESSION 1884-5.

FOURTH MEETING,

At the Town Hall, Salford, Monday, April 20th, 1885, at 7 30 p.m.

His Worship the Mayor (Alderman Makinson, J.P.), in the chair.

The minutes of meeting held March 2nd were read and approved.

The following presentations to the Society were announced:—

To the Preliminary, &c. Funds:

	£	s.	d.
Mr. J. R. Heaven	5	5	0
Mr. W. Mather, J.P.	5	0	0
Mr. Arnold Dehn	1	1	0
	£11	6	0

Books, &c.; Bronze medal and diploma from the Marseilles Geographical Society, and a number of books, &c.*

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* Particulars will be found at page 126, under the heading "Additions to the Library."

The election of the following members of the Society at the last meeting of the Council was declared :—

Ordinary : Miss M. Millington, Mr. Robert W. Williamson, Mr. Bernard Alexander, Mr. Isaac Hoyle, J.P., Mr. E. F. Steinthal, Mr. J. C. Waterhouse, Mr. R. J. Linton, Mr. Henry L. Knoop, Mr. Henry Simon, C.E., Mr. Nathan Smallpage, Mr. George Griffin, Mr. Joseph Hinmers, Mr. James Fildes Pearson, Mr. Albert Hugh Lloyd.

Associate : Mrs. M. C. Ogden, Miss F. E. Ogden, Mr. F. E. Ogden, Mr. S. J. Reade, Mr. Meyer Cohen, Mr. E. N. Molesworth-Hepworth, Mr. Charles Dawson.

Honorary : Prince Roland Bonaparte, Paris.

Corresponding : Senor Don Francisco S. Plant, Philippines ; Monsr. Leon Bigot, Professor of the University, Paris.

Life Member (by payment of £10 10s.) : Mr. Frederick Burton.

Candidates were nominated for election at the next meeting of the Council.

Letters were read from the Prince Roland Bonaparte, Paris ; The Right Hon. Lord Aberdare, G.C.B. ; Mr. H. M. Stanley, acknowledging their election as honorary members of the Society ; and M. Leon Bigot, Professor of the University of Paris, as corresponding member of the Society.

Announcements were made, of an invitation from the President and Directors of the Chamber of Commerce to hear an address by Mr. Holt S. Hallett, on "Burmah and the Shan States," at the Mayor's Parlour, on the 21st April, at three o'clock, and of the next meeting of the Society to be held May 12th.

The following resolution of the Council in relation to Societies desiring to affiliate with this Society was read :—

Affiliating Societies.—Resolved : That Societies being not less than ten miles from Manchester may affiliate with this Society on payment of a donation of not less than £2 2s. per year. And that each Society making such a donation shall be entitled to a copy of the publications of this Society, to twelve tickets of admission to each ordinary meeting of the Society, and the members of the affiliated Society shall have the use of the library.

The address to the Society was given by Professor W. Boyd-Dawkins, M.A., F.R.S., on "Canada and the Great North-West." The address was illustrated by a section diagram of the country, and by several very fine Canadian maps (*vide ante*, p 86).

Mr. Jarrett asked a question in relation to the rising of the half breeds ; Mr. E. Helm called attention to the peculiar climatic conditions of the North American continent, the Mayor expressed his great pleasure in hearing the address, and gave some notes of his own travel over the same district. Professor Boyd-Dawkins replied.

It was then proposed by Mr. H. M. Steinthal, Chairman of the Council, and seconded by Mr. Elijah Helm—

That the hearty thanks of the Society be given to Professor W. Boyd-Dawkins, M.A., F.R.S., for his interesting and valuable address.

The motion was carried unanimously.

Mr. H. M. Steinthal then took the chair, and it was proposed by Mr. J. F. Hutton, J.P., President of the Manchester Chamber of Commerce, and seconded by Mr. G. H. Gaddum, Vice-President of the Manchester Chamber of Commerce—

That the best thanks of the Society be tendered to His Worship the Mayor of Salford for his kindness in permitting the Society to use this room, and for his courtesy in occupying the chair this evening.

The Mayor having replied, the meeting terminated.

FIFTH MEETING.

At the Manchester Athenæum, Tuesday, May 12th, 1885, at 7-30 p.m. Professor W. Boyd-Dawkins, M.A., F.R.S., in the chair.

The minutes of meeting held April 20th were read and approved.

The following presentations were announced:—

To the Preliminary, &c., Expenses Fund: Mr. F. Burton, £1 1s.
Books, &c.; a number of books and maps, particulars of which will be found on page 126.

The election of the following members of the Society at the last meeting of the Council was declared:—

ORDINARY: Mr. John C. Edgar, Mr. L. Hoyle, Mr. James Fildes, Mr. George Philip, Mr. John Heginbotham, Mr. Charles Lings, Mr. Alfred Higgins, Mr. James R. McLaine, Mr. James T. Livesley, Mr. W. T. Fisher.

ASSOCIATE: Mr. Montroyd Sharp.

Nominations for membership for election at the next meeting of the Council were read.

Announcements were made in reference to the Journal, the library, and the next meeting of the Society to be held May 19th, and of the appointment of "an Educational Committee," in the following terms:—

Resolved (by the Council),—That a committee be appointed to enquire into the present position of Geographical Education in this district and elsewhere, and that the committee be requested to report to the Council as early as convenient with suggestions to the Council in what way this Society may best conduce to its advancement, and that the following be the committee with power to add: Mr. H. M. Steinthal, Chairman of the Council; Mr. J. F. Hutton, J.P., Vice-Chairman of the Council; Mr. A. R. Gallé, Honorary Secretary; F. Zimmern, Honorary Secretary; the Rev. L. C. Casartelli, M.A., Ph.D.; Professor W. Boyd-Dawkins, M.A., F.R.S.; Professor T. H. Core, M.A.; Professor A. W. Ward, Litt.D.; Mr. S. Dill, M.A.; the Rev. Canon R. H. Brown, M.A.

The address to the Society was given by Mr. J. Annan Bryce, of London, on "Siam and the Shan States," and was illustrated with large maps, one kindly lent by Mr. Holt Hallett.*

Several members asked for further information, which was fully given by Mr. Bryce.

It was then resolved, on the motion of Mr. J. F. Hutton, J.P., and seconded by Mr. H. M. Steinthal—

That the best thanks of the Society be given to Mr. J. Annan Byrce for his interesting address.

Mr. Bryce responded.

Mr. J. F. Hutton having taken the chair, it was unanimously resolved, on the motion of the Very Rev. Monsignor Gadd, seconded by the Rev. L. C. Casartelli, M.A., Ph.D.—

That the hearty thanks of the Society be given to Professor W. Boyd-Dawkins, M.A., F.R.S., for his kindness in occupying the chair, and for his very valuable services to the Society.

Professor Boyd-Dawkins replied, and the meeting terminated.

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* This extremely interesting paper (with a sketch map of Siam, &c.) will be published in a subsequent number of the Journal.

SPECIAL MEETING,

At the Manchester Athenæum, Tuesday, May 19th, 1885, at 7-30 p.m. Mr. H. M. Steinthal, Chairman of the Council, in the chair.

This being a special meeting there was no business to transact, and the Chairman introduced Major-General Sir Frederic J. Goldsmid, C.B., K.C.S.I., to read a paper on "Northern India and Afghanistan," illustrated with General Walker's map, lent for the purpose by the Royal Geographical Society.

Mr. Steinthal said: This is a special meeting of the Manchester Geographical Society. In the peculiar circumstances in which we find ourselves with regard to Russia in Central Asia, on the North-Western frontier of Afghanistan, an address from so eminent an authority as Sir Frederic Goldsmid, who is so well acquainted with the locality, the people, and the geography of that territory, will be of great interest and very instructive to us at the present time. Major-General Goldsmid needs no introduction to a Manchester audience. His services in Asia and other parts of the world are well known to us all, and he has had large experience of boundary difficulties in that particular portion of the world, for I believe I am not wrong in stating that he has on two occasions been a Commissioner in settling disputed boundaries in Beloochistan. I trust and hope that Her Majesty's Government and that very able representative of the Government in India, Lord Dufferin, will use their utmost exertions to develop the resources of that great dependency by extending railway and other means of communication so as really to bring it into the most intimate connection with other parts of the world, thus avoiding the periodical famines and other disasters which have taken place, consequent on there being an absence of proper means of communication; and I hope that they will, by meting out even-handed justice, and ruling upon common-sense principles, engraft in the minds of the natives loyalty and affection to British rule and to the Throne which will prove a far greater bulwark against attack from without than the most scientific or the strongest natural frontier can do.

[General Goldsmid then proceeded to give his address. *Vide ante*, page 98.]

Mr. Elijah Helm said: I have admired very much the tact displayed by the lecturer andthe way he has put this tract of country before us. He began by directing our attention to the north, and he gradually brought us down to the south and to the scene of our anxieties at the present time. He has dwelt upon the situation delicately and wisely, and I think he has thrown out sufficient material to lead to a careful and thoughtful consideration of all that affects our interests in that great dependency at this moment. Within the last eight days three addresses have been delivered in this hall upon the subject of India. The first was given by Mr. Lalmahun Ghose, the second by Mr. J. Annan Bryce, and the third this evening by Major-General Goldsmid. This shows the great interest that is taken in the question. Three hundred years ago the first Charter was granted by Queen Elizabeth to a handful of officials, and I take you back to the handful of merchants who received the Royal Charter from Queen Elizabeth in 1600. Three hundred years has not yet passed away, and yet see to what a prosperous state India has been brought! The prosperity of India has greatly advanced and this, I say, is owing to the benign influence of British rule. I hope that any proposal to establish communication between India and China, as suggested in Mr. Bryce's address, will be well considered by all interested in those two countries, and that support will be given to any scheme for this purpose which may be brought forward at the proper time.

Mr. H. H. HOWORTH, author of the "History of the Mongols," said: I have been deeply interested for a long time in the country that has been so well described by the lecturer to-night. I wish to say a few words about the people and their country, because in the presence of the enormous difficulty we are in at the present time, you will find that the key to the whole position is this: while England bases its contention upon the physical condition of the country, Russia on the other hand—and I correspond with a good many Russians—bases its contention entirely on the ethnography and historical surroundings of the problem. They contend that the physical conditions of the country are no elements whatever in fixing the frontier and boundaries, but that you must take the frontier and boundaries which separate different nationalities and different peoples. I will not say whether there is anything sinister behind their contention, but that is their position; and if we are to understand the problem, and are to arrive at a satisfactory and permanent settlement of the dispute, it is incumbent upon us to understand upon what data our opponent bases her contention. The Russians hold that in Asia the only suitable boundaries are those which define the localities occupied by the nomadic tribes. Certain tribes which yield allegiance to Russia are wanderers, pitching their tents in one place in summer and another in winter, and in the latter season they are bound to seek a place which gives them shelter. Hence the Russians lay claim to some of the territory now in dispute, because, as they say, it has been occupied by some of their subjects. With regard to Herat, the Afghans are there regarded as foreigners, and their presence is resented by the natives of the town as opposed to their history and traditions. The place belonged originally to Persia, and it is a great difficulty that we have to solve, in fixing a boundary for Afghanistan, that we have to deal with the continual and natural ambition of Persia to recover ground which she lost when this part of the country was conquered by the Afghans at the end of the last century. It has been argued that until the Russian and English boundaries are conterminous there will always be a bone of contention, and it has always seemed to me that there is a good deal of reason in some of the contentions of Russia, whatever motives there may be behind them.

Mr. Oliver Heywood moved a very hearty vote of thanks to Major-General Goldsmid for his admirable and instructive address, as follows:—

> That the best thanks of the Society be hereby tendered to Major-General Sir Frederic Goldsmid, C.B., K.C.S.I., for his kindness in addressing the Society, and for his able and very instructive address.

Mr. J. F. HUTTON in seconding the proposition said: In a commercial community like that of Manchester we desire to know what are the interests that England has in the vast district of Afghanistan and other places adjoining India. What are those interests that we are called upon to defend? We know how to defend our people in India, but how are we to defend our commerce and prevent it from passing from the frontier of India? Russia would like to obtain our trade and it is of great interest to Manchester that we should not allow it to pass from us.

Monsignor Gadd supported the motion and it was carried unanimously.

Major General Goldsmid responded.

Mr. J. F. Hutton, J.P., having taken the chair,

The Rev. L. C. Casartelli, M.A., moved, and Mr. Thewlis Johnson seconded a vote of thanks to Mr. Steinthal, Chairman of the Council of the Society, for presiding, viz.—

> That the hearty thanks of the Society be given to Mr. H. M. Steinthal, the Chairman of the Council of the Society, for his kindness in occupying the chair, and for his many services to the Society.

The motion was passed unanimously, and Mr. Steinthal having replied, the meeting closed.

SIXTH MEETING.

At the Manchester Athenæum, June 12th, 1885, at 7-30 p.m.

Mr. J. F. Hutton, J.P., F.R.G.S. (President of the Chamber of Commerce), Vice-chairman of the Council, in the chair.

The minutes of meetings held May 12th and May 19th were read and approved.

The following presentations were announced :—

For preliminary, &c., Expenses Fund :

	£	s.	d.
Mr. T. R. Wilkinson	2	2	0
Mr. Rudolph Dehn	2	0	0
Mr. Harry Nutall	1	1	0
	£5	3	0

Books, &c., see page 126.

The election of the following members at the last meeting of the Council was declared :—

Ordinary : Mr. Walter Smith, Mr. Edward Donner, Mr. J. Fox Turner, Mr. George H. Peel, Mr. F. S. Higson, Mr. Thomas Brentnall, Mr. W. A. Glazebrook, Mr. Richard Sykes.

As an Affiliated Society : The Burnley Literary and Scientific Club.

Associate : Mr. T. J. Day, Mr. Joseph Jakens, Mr. Alderman B. Buckley.

Corresponding : Mr. H. H. Lee, J.P., Banana, Congo ; Rev. C. Maples, Masasi, East Coast of Africa.

Nominations for membership for election at the next meeting of the Council were read.

The address to the Society was given by Mr. H. H. Johnston, F.R.G.S., on "British interests in East and Equatorial Africa." The address was illustrated by a large map drawn from the sketches of Mr. Johnston and Mr. J. Thomson, and lent to the Society by the Royal Geographical Society.

The Chairman, in introducing Mr. Johnston to the meeting, said : I have been requested to remind you that this is the last ordinary meeting of this Society for the present session, and I think we should briefly review the work which the Society has already done, and that mention should be made of addresses which have been delivered to us. As you are aware, it is about eight months since Mr. H. M. Stanley attended the first meeting, held in the Free Trade Hall, and gave us a very full and interesting address on the subject of Geography and on the Continent of Africa. At a subsequent meeting we were favoured with the presence of Lord Aberdare, President of the Royal Geographical Society, and Consul Holmwood. Mr. Arthur Arnold, M.P., has given us an address on "Our Commercial Opportunities in Western Asia; the Rev. Chauncy Maples, on "The Results of Travel and Exploration during the last six years, of the country lying between Lake Nyassa and the East Coast of Africa;" Professor Boyd Dawkins, on "Canada and the Great North-West;" Major-General Sir Frederic Goldsmid, on "Northern India and Afghanistan;" Mr. J. Annan Bryce, on "The Siam and Shan States." I have briefly noticed "The History of Discovery," and to-night Mr. H. H. Johnston will give an address on "The Commerce of the East Coast of Africa." I am quite sure, ladies and gentlemen, that the large attendance at all the meetings and the great interest displayed by the audience fully justifies the formation of this Society. Besides addresses, there is a most important work which it was thought desirable should be undertaken by this Society—I mean the question of geographical education. The Council has considered the subject and has appointed an Education Committee to deal with it. That committee has not yet been able to present a report, but I feel convinced that they will learn that the ignorance which exists on the subject of geography in this country is almost incredible. That committee will lead to some very valuable work being done. The annual meeting of the Royal Geographical Society was held in London last Monday, and the report of Mr. Scott Keltie, which has just been presented, upon the state of geographical knowledge at home and abroad was referred to. From that report (it seems almost incredible) there is scarcely a country in Europe which is not ahead of England in regard to geography. Mr. Scott Keltie, speaking of Great Britain, says: "There is no encouragement to give the subject a prominent place in the school curriculum; no provision except at elementary normal schools for the training of teachers in the facts and principles of the subject and in the best methods of teaching it; no inducement to publishers to produce maps, globes, pictures, reliefs, or other apparatus of the quality and in the variety to be found on the Continent; while our ordinary text books are, as a rule, unskilful compilations by men who have no special knowledge of their subject." I ask you if this is a creditable state of things for a country like England—the greatest commercial country in the world—that she should be absolutely ignorant of the elements of geography? Everybody has felt the deepest interest in the geographical work which has gone on throughout the Continent of Africa, and if there is one gentleman more than another who deserves a cordial reception from the members of this Society, it is Mr. Johnston, who is to deliver an address to us this evening, As you are aware, the greater portion of the country of which Mr. Johnston is about to speak, lies in the dominions of the

Sultan of Zanzibar, and it is most appropriate that he should come down at the present moment, when there is so much discussion in the newspapers and elsewhere, and so much excitement displayed as to the rights of the Sultan on this coast, and the pretensions which are put forward by other powers to usurp those rights. You know that the Sultan owns something like 800 miles of the coast. It is only about 100 years since his dynasty commenced, and in that time the rulers of that country have done their very utmost to promote civilisation and commerce. The present monarch of Zanzibar may be considered, amongst the monarchs of Africa, as one of the most civilised and enlightened of men. He has established the electric light in his country. He has the telephone in his palace, and there exist there other features of civilisation and progress which would astonish most people in this part of the world. Another feature is, that there are in Zanzibar about 7,000 British subjects, not only residing there, but many holding and cultivating land. The Suitan, by making progress and extending civilisation, is exciting the cupidity of other European powers, and if there is a duty which is paramount upon Englishmen at the present time it is that we should stand up and see that our rights are maintained there. The Sultan may be considered as our ancient ally, and he has, moreover, obeyed the summons of Great Britain to put a stop to the slave traffic. It is our duty to render him every assistance in maintaining his independence in its integrity, and in keeping open the roads to the vast population of the interior of Africa.

Mr. Johnston then gave his address.*

Several questions having been put to Mr. Johnston by Mr. Oliver Heywood and other members,

Mr. JOHNSTON replied : The physical difficulties of constructing a railway in the vicinity of Kilima-Njaro are really remarkable for their absence. As to the roads of the country, they are very old ones, probably they have existed for centuries. They are not, of course, after our notion of roads, but still they are very convenient tracts, along which it is easy to pass. The Sultan of Zanzibar has a persistent idea that coal exists in the country, but hitherto none has been discovered. With regard to the elephant; if you go out there, organise bands of hunters and do nothing but slay the animal. It is very likely that in about fifteen years the elephant will be exterminated in the country, but there would remain a vast quantity of ivory. As to the slave trade, although agriculture might incite it on the coast, a stop would be put to it in the interior of the country.

Mr. Oliver Heywood then moved :—

> That the best thanks to the Society be tendered to Mr. H. H. Johnston, F.R.G.S., for his very admirable and interesting paper.

Professor BOYD-DAWKINS in seconding the motion said: There are a few words I would like to say. I cannot at all sympathise with Mr. Johnston's statement that the heroic days of Queen Elizabeth are at an end. I for one do not agree with the sentiment, for it seems to me that whilst we have such men as Stanley, Livingstone, and Mr. Johnston himself, doing exactly the same class of work that was carried on in a far wider sense in the more turbulent times of Queen Elizabeth, I for one do not despair in the least degree for my country and the English race. Mr. Johnston has spoken of the climate of the East Coast of Africa, and has stated that the maximum heat is about 81 degrees. Why that is lower than the temperature registered in Manchester within the last ten days. It seems then, that we have not only the encouragement of commerce to lead us into these regions, but we can even carry our own climate with us, and I feel quite sure that so patriotic a people as those of Lancashire would be considerably influenced by that fact.

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* The paper and sketch map will appear in the next number of the Journal.

The proposition was carried with acclamation.

Mr. JOHNSTON in reply said : I feel fully that the future of England depends upon fresh markets being opened out for her commerce. I have been told by an Australian traveller that Australia is producing everything for herself cheaper than she can bring it from Manchester, and so our trade there is being driven away. It is not to be doubted that other colonies will, in the course of time, follow this example, and so Manchester will be at a loss for a fresh field. If the great country, of which I spoke this evening, were to come into the hands of a power whose avowed intention was to crush our foreign trade, the loss to our country would be considerable, and we should look to it that measures were taken to prevent such a catastrophe. It is his loyalty to England and his protection of English trade that has brought about the present difficulties of the Sultan of Zanzibar, and it would, therefore, be wicked and base of us to desert him in the hour of his need.

Mr. H. M. Steinthal then took the chair, when Mr. S. Ogden, J.P., moved, and the Rev. L. C. Casartelli, M.A., Ph.D., seconded the following :—

> That the hearty thanks of the Society be given to Mr. J. F. Hutton, J.P., for his kindness in occupying the chair and for his many valued services to the Society.

The resolution was carried unanimously, and Mr. Hutton having responded, the meeting terminated.

ADDITIONS TO THE LIBRARY

FROM MARCH TO JUNE, 1885.

An Account of the Eruption of Mount Vesuvius of April, 1872, with two Charts, by J. M. Black, F.G.S. By the Author.

La Nouvelle Université Orientale d'Angleterre, par J. Van Den Gheyn, S.J. Louvain, Ch. Peeters, 1885.

Ethnographie et Linguistique, by J. Van Den Gheyn, S.J. Bruxelles, A. Vromant, 1885.

Le Yidghah et le Yagnobi, étude sur Deux Dialectes de l'Asie Centrale, by J. Van Den Gheyn, S.J. Bruxelles, F. Hayez, 1883.

Les Langues de l'Asie Centrale, by J. Van Den Gheyn, S.J. Leide, E. J. Brill, 1884.

Le Séjour de l'Humanité Postdiluvienne, by J. Van Den Gheyn, S.J. Bruxelles, A. Vromant, 1883.

Le Plateau de Pamir d'après les Récentes Explorations, by Van Den Gheyn, S.J. Bruxelles, A. Vromant, 1883..

Les Migrations des Aryas, by J. Van Den Gheyn, S.J., with Map illustrating the Migrations. Anvers, De Backer, 1882.

[The above seven pamphlets were presented to the Society by the Author through the Rev. L. C. Casartelli, M.A., Ph.D.]

Central Asia and its Question, by Major-General Sir Frederic J. Goldsmid, C.B., K.C.S.I. London, Stamford, 1873. By the Author.

Notes on Recent Persian Travel, by Major-General Sir Frederic J. Goldsmid, C.B., K.C.S.I. London, Clowes and Son, 1875. By the Author.

Persia and its Military Resources, by Major-General Sir Frederic J. Goldsmid, C.B., K.C.S.I., 1879. By the Author.

Encyclopædia Britannica, Part 71, 9th edition, Containing Articles on Persia, by Major-General Sir Frederic Goldsmid, C.B., K.C.S.I., and others, with Maps of Ancient and Modern Persia. Edinburgh, A. and C. Black, 1885. By Major-General Sir F. J. Goldsmid, C.B., K.C.S.I.

Eastern Persia, 1870-1872, Vol. 1—Geography with Narratives, Illustrated, and Maps. Edited by Major-General Sir F. J. Goldsmid, C.B., &c.

Eastern Persia, 1870-1872, Vol. 2—Zoology and Geology, by W. T. Blanford. Illus- with very beautiful drawings of Birds, Animals, Reptiles, &c.

Telegraph and Travel, 1874, by Major-General Sir F. J. Goldsmid, C.B., K.C.S.I. Illustrated and Maps. London, Macmillan.

[The above three volumes were presented to the Society by the Secretary of State for India at the instance of Major-General Sir F. J. Goldsmid, C.B., K.C.S.I.]

The Congo and the Founding of its Free State, 2 vols. illustrated, and maps, by Henry M. Stanley. London, Sampson, Low, Son & Co., 1885, £2 2s. [The above were presented by the Author, with the following inscription in the first volume: "To the Manchester Geographical Society these volumes are presented, with best wishes for its prosperity, by (signed) Henry M. Stanley. London, June 1st, 1885."]

Across Africa, a new edition, illustrated, and map, with a new introduction and three additional chapters, by Commander V. L. Cameron, C.B., D.C.L. London and Liverpool, Philip & Son, 1885, 12s. 6d. Presented by the Publishers.

Report of an Address by the Right Rev. Bishop Steere, at Liverpool, 1882, in connection with the Universities' Mission to Central Africa. By Rev. Chauncy Maples.

The Victoria Year Book for 1883-4, with Tables and Map. By H. H. Hayter, C.M.G. London, Trübner and Co., 1884. By the Author.

The Canadian Pacific Railway, with Map. Montreal, Drysdale and Co., 1885. By Mr. A. Wainwright.

Foreign Educational Codes. By A. Sonnenschein, 1881. London, Sonnenschein, and Allen. By the Rev. L. C. Casartelli, M.A., Ph.D.

Harvard University Bulletin, No. 25, vol. 3. No. 2, edited by Justin Winsor, contains a list of maps in Peterman's Mittheilungen (second part).

Harvard University Bulletin, No. 30, vol. 4. No. 1. Edited by Justin Winsor. Contains the first part of Index to Maps in the Royal Geographical Society's publications, &c., viz., Proceedings (first and second series), Journal, Supplementary Papers, Ocean Highways (first and second series), and Geographical Magazine from 1830 to 1885.

Bibliographical Contributions. No. 14. Library of Harvard University. Notes on the Historical Hydrography of the Handkerchief Shoal in the Bahamas. By Wm. H. Tillinghast.

——— No. 16. Classified Index to the Maps in Peterman's Geographische Mittheilungen, 1855-1881. By Richard Bliss.

——— No. 18. A Bibliography of Ptolemy's Geography. By Justin Winsor.

The above five papers presented by Mr. Justin Winsor, Librarian of the Harvard University.]

Proceedings of the Royal Geographical Society, Nos. 1, 2, 3, 4, 5, 6, January to June, 1885, by the Society. The attention of the members is particularly directed to the following articles :—

- **(1) Afghan Boundary Commission. Geographical notes. By Major T. H. Holdich, R.E. (Nos. 1, 3, 5.) With preliminary map of routes. (No. 5).**
- **(2) Four Years' Journeyings through Great Tibet by one of the Trans-Himalayan Explorers of the Survey of India. By General J. T. Walker, C.B., F.R.S. With map. (No. 2.)**
- **(3) Southern Coasts of the Red Sea: European claims in 1885, by Sir R. W. Rawson, K.C.M.G. With map. (No. 2.)**
- **(4) Kilima-njaro and Country. By H. H. Johnston. With map. (No. 3.)**
- **(5) Dutch Expeditions to North Coast of New Guinea, undertaken by Mr. D. F. van Braam Morris, in 1883 and 1884. (No. 3.)**
- **(6) Exploration of King Country, New Zealand. By J. H. Kerry-Nicholls. With map. (No. 4.)**
- **(7) The Irawadi River. By R. Gordon, C.E. With maps of the Sanpo and Irawadi Rivers. (No. 5.)**
- **(8) Remarks on the Port of Nakala and other Ports on Northern Mozambique Coast. By H. O'Neill, F.R.G.S., H.M. Consul, Mozambique. With map. (No. 6.)**
- **(9) Togo Land, the German Protectorate on the Slave Coast. With map. (No. 6.)**

The Scottish Geographical Magazine, Nos. 1, 2, 3, 4, 5, 6, January to June, 1885. By the Society. The attention of the members is directed to the following articles :—

- **(1) The Physical Features of Scotland. By Professor Geikie, LL.D., etc. With Orographical Map of Scotland. (Nos. 1-3.)**
- **(2) The Use of Cylindrical Projection for Geographical, Astronomical, and Scientific Purposes. By the Rev. James Gall. (No. 4.)**
- **(3) The Egyptian Sûdan: compiled from the latest official reports. (No. 4.)**
- **(4) The Egyptian Sûdan. By Dr. R. W. Felkin, F.R.S.E., F.R.G.S. (No. 6.)**
- **(5) Rivers and Rivers. By J. Clyde, M.A., LL.D. (No. 4.)**
- **(6) A Note on Persian Trade. (No. 5.)**
- **(7) A Sketch of South-Western Turkomania, with Map. By M. Paul M. Lessar. (Nos. 5 and 6.)**
- **(8) French in Tonquin, with Sketch Map. By John Geddie, F.R.G.S. (No. 5.)**

Berlin—Mittheilungen der Afrikanischen Gesellschaft in Deutschland. Band 4, Heft 4. By Dr. W. Erman.

Bordeaux—Bulletin de la Société de Géographie Commerciale de Bordeaux; Nos. 1 to 13, 1885. By the Society.

Bourg—Bulletin de la Société de Géographie de l'Ain; Nos. 1 and 2 (January to April), 1885. By the Society.

Brest—Bulletin de la Section de Géographie (Société Académique de Brest); Nos. 2 and 3, 1885. By the Society.

Bruxelles—Bulletin de la Société Royale Belge de Géographie; Nos. 1 and 2, 1885 (January to April). By the Society.

——— Recueil Consulaire du Royamme de Belgique; Tome 48, 1 to 5, 1884; Tome 49, 1 to 5, 1884; Tome 50, 1, 3, and 4, 1884. By the Rev. L. C. Casartelli, M.A., Ph.D.

——— Bulletin du Musée Commercial, June 6, 1885, and June 13, 1885. By Mr. J. F. Hutton, J.P.

Bruxelles—Le Mouvement Géographique, Nos. 10, 11, 12 and 13, 1885. By the Editor, M. Th. Falk-Fabian.

Buenos Ayres—Estadistica Commercial, Nos. 26 and 27, 1884; Nos. 29, 31 and 32, 1885. By Señor F. Latzina.

Dijon—Mémoires de la Société Bourguignonne de Géographie et d'Historie. Tome 2, 1885. By the Society.

Douai—Bulletin de l'Union Géographique du Nord de la France. Nos. 9 and 10, 1884. Nos. 1 and 2, 1885. By the Society.

Florence—Bullettino della Sezione Florentina della Società Africana d'Italia. Nos. 1, 2, and 3, 1885. By the Society.

Frankfurt—Deutsche Kolonialzeitung. Organ des Deutschen Kolonialvereins Frankfurt-a-Main. Nos. 1 to 13, January to June, 1885. By the Society.

Genève—L'Afrique Explorée et Civilisée. Nos. 4 and 5, 1885. The London Chamber of Commerce (with several others). The Editor, M. H. Georg.

———Le Globe, Journal Géographique, Organe de la Société de Géographie de Genève No. 2, February to April, 1885. By the Society.

Havre—Bulletin de la Société de Géographie Commerciale du Havre. No. 1, February 1885. No. 2, March and April, 1885. By the Society.

——— Bulletin de la Société Géologique de Normandie. Tome 9, 1882. By the Society.

Halle—Mittheilungen des Verein für Erdkunde zu Halle A/S., 1877, 1878, 1879, 1880, 1881, 1882, 1883, 1884. By the Society.

Irkutsk—Izvyestiya Vostochno Sibirskago Otdyela Imperatorskago Russkago Geographicheskago Obshchestva, June 15th, Nos. 3 and 4, 1884 and 1885. By the Society.

Karlsruhe—Verhandlungen der Badischen Geographischen Gesellschaft zu Karlsruhe, 1880-2, 1882-3, 1883-4. By the Society.

Lille—Bulletin de la Société de Géographie de Lille, Nos. 1 to 6, 1885. By the Society

Lübeck—Mittheilungen der Geographischen Gesellschaft in Lübeck. Heft 4, 5, and 6, Dr. W. Schaper. By the Society.

Lyon—Bulletin de la Société de Géographie de Lyon. Nos. 7, 8, 9, January to May, 1865. By the Society.

Marseille—Bulletin de la Société de Géographie de Marseille, Nos. 1, 2, and 3, January to March, 1885. By the Society.

Metz—Jahresbericht des Vereins für Erdkunde zu Metz für 1883-4, Metz, 1885. By the Society.

Milano—L'Esploratore, Organo Officiale della Società d'Esplorazione Commerciale in Africa, No. 4, 1885. By the London Chamber of Commerce.

Nancy—Bulletin de la Société de Géographie de l'Est. No. 1, 1885, pp. 1 to 292. By the Society.

Neuchatel—Bulletin de la Société Neuchateloise de Géographie. Reglement, 1885. By the Society.

Oran (Algeria)—Bulletin de la Société de Géographie et d'Archéologie de la Province d'Oran. No. 23, 1884 (October, November, December). By the Society.

Paris—La Chronique Géographique Mensuelle (2nd series). No. 1, June, 1885. By Mons. Léon Bigot, Directeur.

——— Révue Géographique Internationale. No. 114, April, 1885. By the London Chamber of Commerce.

——— Bulletin de la Société de Géographie Commerciale de Paris. Vol. 7, Nos. 1 and 2, 1884-5; Supplement to vol. 7 (with list of members). By the Society.

Paris—Notice sur la Société de Géographie de Paris, 1883.

——— Bulletin (ditto), Nos. 1 to 13, January to June, 1885. By the Society.

Rochefort—Bulletin de la Société de Géographie de Rochefort. No. 1, July, August, September, 1884; No. 2, October, November, December, 1884, and list of members. By the Society.

Rouen—Bulletin de la Société Normande de Géographie, November, December, 1883. By Mr. W. C. Jones.

Toulouse—Bulletin de la Société de Géographie de Toulouse. Nos. 5, 6, and 7. By the Society.

MAPS.

Stanford's Wall Map of Asia, 1885. By Mr. J. Annan Bryce.

Map of Zanzibar, 1885. By Mr. J. F. Hutton, J.P.

Reduced Ordnance Plan of Buxton and Neighbourhood. By J. Bartholomew, F.R.G.S. Six inches to the mile. 1885. London, W. H. Smith and Son. 1s.

Reduced Ordnance Map of Buxton, Matlock, and Environs. By J. Bartholomew, F.R.G.S. Two miles to an inch. 1885. London, W. H. Smith and Son. 1s.

Reduced Ordnance Maps of Scotland—Outer Hebrides (Lewis and Harris). By John Bartholomew, F.R.G.S. Two miles to one inch. 1885. Edinburgh, A. and C. Black. 2s. 6d.

Orographical Map of Scotland, showing elevation and physical relief of land by contours of altitude and graduated tints. Ten miles to an inch. By John Bartholomew, F.R.G.S. 1885. Edinburgh, A. and C. Black. 2s. 6d.

These four maps have all new work upon them, the last one especially being noticeable and very striking in the effect of the graded tints. Presented by John Bartholomew, F.R.G.S.

GEOGRAPHICAL NOTES.

EXPEDITIONS AND EXPLORERS.

The Hungarian Geographical Society is sending an expedition to the Ural, among the Bakshir tribes, to examine the language, legends, and customs of these fast-expiring people.

The Russians have finished their measurement of the Merv Oasis, which they reckon at 667·9 square kilometres. As regards the mapping of certain parts of the Transcaspian provinces, Captain Gedeonof has made a long journey by Kizil-Arvat, Igdy, Khiva, Petro-Alexandrovsk, then upwards to Chard-suni, and back by Merv and Akshabad, 1,200 kilometres altogether. He has fixed the sites of 800 localities.

Robert Flegel has arrived safely at the Canary Islands.

On the 21st ult., Dr. Fischer started on an expedition to discover Dr. Junker and party, who are supposed to have been deported to the interior by the Mahdi. Perthes' publishing firm (at Gotha) publishes an appeal for further funds to aid the expedition. Dr. Fischer will go by Zanzibar, whilst Dr. Lenz will follow a similar object, starting from the Congo, and collections are being made for him in Austria.

The missionaries in Bagamoyo have opened a station at Cunzinagira, on the left bank of the Chingani. The soil is said to be fruitful, and the population peacefully inclined.

The brothers James, as well as Professor Paulitschke and Herr Von Hardegger, have returned from Somali land.

The Italian expedition under Ferrari is at Adona, on its way from a visit to the Negus of Abyssinia.

Dr. Chavanne sailed on April 6th from Lisbon to West Africa; and Colonel Strauch is about to leave for the Congo to organise the government of the new state.

The American Methodist Mission has sent 40 missionaries, men and women, to found mission stations on the Lower Congo.

H. de Carvalho arrived on February 17th at Thinge, on the Kuango, and started thence for Muatyambo. On the right bank of the Kuango, near Cavenda-Camubenba, the expedition suffered loss from the robberies and flight of their native carriers.

Veth and Van der Hellea left Mossamedes last December for Humpata, to visit the Boers of that place. From the same port Dewitz and Groschke started for the interior to Huilla, Caconda, Kipungo, and Lucque, on the Cunene. They found a rich fruitful land, 6,000 feet high, healthy and well suited for agriculture.

In South America, an engineer, Juan Elia, is exploring the Patagonian Andes for oil. O'Connor is about to explore the hitherto entirely unknown lake of Iberá, near to Corrientes.

A new expedition for Polar research, under Lieut. Hovgaard, of the Danish navy (a member of the *Vega* expedition), is about to set out for the north by the same route as that taken by Melville, viâ Franz-Josef Land. The Copenhagen shipowner, Mr. Gamel, has again placed his *Dymphna* at the disposal of the expedition.

[The above notes, taken from the *Echo* of Berlin (May 15th) and other papers, will give some idea of the extraordinary activity of geographical exploration now going on.]

Expedition of Mr. Victor Giraud to the great Lakes of Equatorial Africa.—Mr. V. Giraud intended to go from Zanzibar to the Lake Bangweolo, thence down the river Luapula until he reached Manyema through the lake Moero. The traveller started from Zanzibar on Board the "Boursaint" on the 17th of December, 1882. He landed at Dar-es-Salam, which Said Medjid tried to make an outlet for the caravans, and which is now only a heap of picturesque ruins. The officer of the "Boursaint" accompanied him to the starting place. Great difficulties were encountered during the earlier journeys on account of the want of drinkable water and the rainy season. Uzaramo, which Mr. Giraud crossed, is a very poor and almost uninhabited country; there the worship of fetish is almost universal; the natives have wild habits, and when a death occurs it is always supposed the deceased has been poisoned, and the mganda or conjuror indicates someone who is supposed to be the culprit. Ukhutu is 15 or 20 days' march from the sea coast, and safe from the plundering bands of marauders who seize all provisions, &c., in Uzaramo. Round the villages are grown rice, sago, maize and tobacco. The Ukhutu make their villages by cutting down the bush hedges. The country is fertile and is about 165 to 170 yards above sea-level. The high tablelands of Usagara are very difficult to cross, especially in the rainy season. The frightened natives leave their villages on the approach of the caravan. Uhéhé and Ubéna are flat and fertile countries. The chief levies a *hongo*, which is a sort of toll. Uhéhé, Ubéna, and Usango abound in cattle; so does Kondé. Big game, such as giraffe, zebra, rhinoceros, and buffalo, are very plentiful. Wild beasts are also to be found. Giraud having arrived at the foot of the Livingstone range, the masseira or rainy seasons got more and more severe, and on the mountains of Usagara, more than 9,000 feet high, every day, about one o'clock, a tropical storm broke out, and the sun was not visible for some six weeks. Before arriving in Kondé the traveller crossed three rivers. The inhabitants were much scared, and before parting with any food it was necessary to hold a long palaver. Kondé is well irrigated, the population is strong, and the cattle abundant. The caravan arrived at last at Makula's on the 17th of April, 1883, whence they started again, the sun shining brilliantly. The people of Uemba are addicted to pillage. The caravan crossed the Chambeze, and arrived at a large country, where the population was very warlike. From Zapaïra to the Lake Bangweolo, four days' journey, they crossed immense marshes. Near the Lake Bangweolo, Mr. Giraud surveyed the island Kalilo, a thickly populated and fertile country, the peninsula of Matipa, and the island of Kisi, the view of which from the lake was very beautiful. He could not find out the mouth of the Chambeze amidst the rushes. Kalilo and Matipa are covered with villages in which is cultivated sago, maize, sweet potatoes and some bananas. At the head of Kabendé, which is uninhabited, Mr. Giraud, after sailing on the Luapula, branched off into a lagoon. He had to put up with great hardship for a week, as he had no flour. There was, however, plenty of game. The days were torrid and the nights very cold. He saw the coast of Manda, celebrated by the death of Livingstone. After three days' sailing he got into the rapids, and was attacked by the army of Mirambo, and was obliged to surrender. His party were prisoners for two months. When liberated they were deprived of the majority of their guns. They arrived at the lake Moero; it is a pretty lake, limited at the north by hills, and at the south by sand beaches, broken only by the mouth of the Kalongosi. Giraud went on to Insama and Iendwe, seeing along the road the spectacle of a horrible famine. At Iendwe he met with two English missionaries, Messrs. Swann and Brooks, who were building an iron boat to sail and cruise on the Lake Tanganika. The caravan then turned to Karema, while Giraud crossed the lake. Karema is a Belgian station, built by Captain Cambier on the shores of the lake, and now 3,600 feet from the water. Giraud went down to Kilando, whence he crossed the lake to Kapampas, thence along the coast to Mpala, seeing nothing living but monkeys. At Mpala, the second Belgian station, his servants rebelled, plundered the neighbourhood, and threatened to attack Mpala. Giraud was obliged to abandon to them his goods and all his guns except three. He went down again to Iendwe, where he equipped a little caravan for Mambwe where he took 100 menservants. The traveller remarks that there are no mountains at Mambwe, only some hills 1,200 to 1,500 feet high. He crossed the road by which he had first travelled at Kwamaboya and arrived at the Lake Nyassa at Karonga, situated in an immense and unhealthy plain. The English steamer Ilala took him on board and crossed the lake, whose eastern coast is almost uninhabited, and the western coast only sparsely peopled. At Livingstonia, Giraud met with an English gentleman, Mr. Kerr, who went back to the coast with him. In the valley of the upper Shiré the population is very dense, and the animals numerous. The English colony of Mandala, or Blantyre, is healthy, but the land is not fertile. The colonists live principally on tinned meat and preserves. On going down the Shiré, the caravan was seized by the Manganja, who were at war with the Portuguese. Eventually the Portuguese flotilla rescued them, and returned to the Zambeze. They descended the Shiré, the Zambeze, and the Quaqua, and struck the ocean at Quilimane. A month later, Giraud was at Zanzibar, after two years' absence. The natives of the centre of Africa live in very great wretchedness. They appear to dislike the large villages because they are afraid of the oppression of the chiefs. They sow in January, and reap in

June; the harvest supplies them with food for three months, the remainder of the year they eat boiled leaves and all kinds of fruits. The growing depopulation is a remarkable fact, owing to famine, war, and to the slave trade. The natives do not cultivate the ground; they do not appear to want civilization; they have nothing, and want nothing.

Tibet.—The *Times*, April 3, has an interesting account of the travels of the native explorer A. K. through Tibet. In the notes of travel, the long debatable question of the identity of the Sanpo and Brahmaputra rivers is discussed.

Turkestan.—Messrs. Brockhaus, of Leipsic, are publishing Vambery's new book under the title of "Das Türkervolk in seinen ethnologischen, und ethnographischen Eisuhangen." He includes the Turkish tribes of Siberia and Central Asia.

Corea.—Professor Karl Gottsche, of the University of Kiel, has returned from his travels in Eastern Asia. After having lectured on mineralogy and geology at Tokio for several years he undertook a scientific exploring expedition in Corea at the request of the Corean Government finishing his exploration in Dec. 1884. His route extended over 3,000 kilometres. Dr. Gottsche intends publishing the results of his investigations.

Persia.—Mr. Alfred H. Browne, formerly a special correspondent of the *Bombay Gazette* and of other Indian papers, and a traveller of considerable experience, is preparing for another journey through Persia, and proposes more especially to devote his energies to an exploration of the Great Salt Steppe or Kawir. Mr. Browne will be glad to receive the suggestions of experts with reference to the work he is about to undertake.——The *Deutsche Handel* (Berlin) publishes the report of a recent German Mission to Teheran, in which encouraging hopes are held out of an increase in German trade with Persia.——The trade route by way of the Persian Gulf is that by which merchants are advised to send their goods, and the articles that are looked upon as having the best chances of success in Persia are sugar, cloth, velvet, light silks, and cotton stuffs.——Germany enjoys with Persia the most-favoured-nation treatment.

East Africa.—The well-known African traveller, Major Serpa Pinto, is stated to have discovered large coal fields south of the Rovuma River. The Rovuma is a coast stream and its estuary is situated about 11 degrees South Latitude. The coal fields have been taken possession of by the Portuguese Government.——Mr. J. T. Last is about to proceed to Eastern Africa, under the auspices of the Royal Geographical Society, to explore the district in the neighbourhood of the Namuli peaks. Mr. Last will land at Lindi, and proceed thence to the junction of the Rovuma and Lujenda rivers, the position of which he will fix astronomically. He will spend six months in examining the neighbourhood of the Namuli Hills, returning to the coast by way of the populous valley of the Likugu.

Greenland.—Nordenskjöld's account of his Greenland expedition of 1883 is about to be published by Messrs. Brockhaus, of Leipsic.

North-West America.—The travels of the brothers Costenoble, undertaken for the Bremen Geographical Society, in North-West America and Behrings Strait, and among the Ilinkit Indians, are about to be published by Messrs. Costenoble, of Jena.

GEOGRAPHICAL EDUCATION.

The Teaching of Geography.—Mr. J. Scott Keltie, the Inspector of Education for the Royal Geographical Society, has written an interesting letter to the *Times* on the teaching of geography. As taught at most of our schools, geography might truly be called the dismal science. How can any reasonable child be expected to take an interest in learning up the capitals of the South American States or the heights of the Andes mountains? In Germany they do things better. They begin with Heimatskunde, which is the study of strictly local topography. "The immediate surroundings of the pupils, the facts and objects which daily face them, are seized upon by the teacher as the medium for initiating the youngsters into the elementary notions of geography." After that they learn something about their district, and then rise to the understanding of their country and the world. This sort of Heimatskunde is a foundation for an intelligent acquaintance with geography which is an uncommonly rare accomplishment with most Englishmen. How many university men are prepared to explain at a moment's notice what is meant by the precession of the equinoxes? What cultivated person has a working knowledge of Asiatic or American geography? When there is a war or a rebellion anywhere we hastily get up the facts by the aid of large maps; but, as a rule, there is a woeful ignorance of geographical learning in this nation of traders and travellers.

THE GERMAN COLONIAL EMPIRE.

We borrow from the *Frankfurter Zeitung* the following complete *résumé* of the recent German Colonial acquisitions, which no doubt will be of both value and interest to our readers. This nascent Empire consists of—

I.—GREAT NAMAQUALAND.

1. *Angra Pequeña,* alias "Lüderitzland," on the West Coast of Africa, from the Orange river to 26° S. lat., extending 20 miles inland, together with three islands, Robben, Penguin, and Haifisch. Area 900 square miles (German) or 18,900 square miles English. Station: Fort Vogelsang, belonging to Messrs. Lüderitz of Bremen. Harbour good and suitable for large ships; climate healthy, but absolute want of drinkable water, which has to be shipped from the Cape. German flag hoisted Aug. 7, 1884, by convention between Lüderitz and the chief, Captain Josef Fredericks.

2. *Captain Josef Frederick's territory,* East of Angra Pequeña, with two German missionary stations, Bethania and Berseba, obtained by Messrs. Lüderitz through treaty.

3. *The Damara and Namaqua Coasts,* 26° S. lat. to 18° S. lat. (Cape Frio, limit of Portuguese territory), excepting Walfisch Bay (English), the only good harbour. The natives, Damaras and Hereros, breed cattle.

II.—CAMEROONS.

1. From the mouth of *Rio del Rei* (4·5° N. lat.) to King Wilhelmsstadt (Bimbia), embracing Rumbi, Bibundi, Bota [Victoria, an English mission station], König Wilhelmsstadt or Bimbia, which (like Victoria), contains a factory of the Hamburg firm, C. Woermann. To the North, Cameroons mountains, highest point, Götterberg, 13,200 feet above sea level. German flag hoisted July 22, 1884.

2. King Bell's Town, King Aqùa's Town, Joss, John Aqua's and Hickory Town, inhabited by Dualla negroes. Climate pestiferous, owing to mangrove swamps at mouths of Cameroons and Mungo rivers. Factories of two Hamburg firms,—Woermann, and Jantzen and Co. An insurrection of Joss and Hickory Town suppressed by German corvettes, December, 1884.

3. From mouth of Cameroons southwards, a string of German factories: Malimba, Little and Great Batanga, Campo Land, Cape Bata, Bata bay, to the Spanish settlement Eyo,—all belonging to the two firms mentioned in No. 2.

III.—TOGOLAND.

On the Slave Coast. A string of factories of various firms: Danoe, Lomé (or Bay Beach), Bageida, Little and Great Popo, Whydah, and Porto Seguro. All lie on a strip of land with Dahomey at the back, separated by lagoons. German flag hoisted July 5, 1884.

IV.—KABITAI AND KOBA LAND.

Between the Rio Pongo and river Dubrecka, opposite Los Islands (English) about 10° N. lat. Also the *Mururu* and *Konobomby* islands, and *Sumbuya Land* to the South. Total area: about 923 square miles. Annexed January 4-6, 1885. Inhabitants, the *Susu*, with some 95 villages. Between Dubrecka and Sumbuya rivers the land is claimed by France.

V.—IN EAST AFRICA.

Land of the "German Society for Colonisation." Between 5° and 8° S. lat., the territories of Usagara, Useguha, Ukami, Nguru. A plateau some 3,000 feet above sea, between the coast (Zanzibar territory) and Lake Tanganyika. Area about 2,500 English square miles.

VI.—ON THE CONGO.

Between the stations of Nokki and Nuam Upozo, opposite Vivi, bought by the German Congo expedition, and flag hoisted December 12, 1884.

VII.—KAISER WILHELMSLAND.

On *New Guinea*. (See page 136-137.)

VIII.—NEW BRITAIN ARCHIPELAGO.

The groups of New Britain (Birara), New Ireland (Tombara), New Hanover, Duke of York, and to the east, Admiralty and Hermit islands. About 30 German factories are scattered about, chief ones at Mioko (Duke of York group) and Matupi (Blanche Bay, New Britain). Flag hoisted November, 1884.

German Emigration.—In startling contrast to the rapid development of German Colonial acquisition, is the decided *diminution* of her emigration. Here are the official returns for the two first months of the last five years:

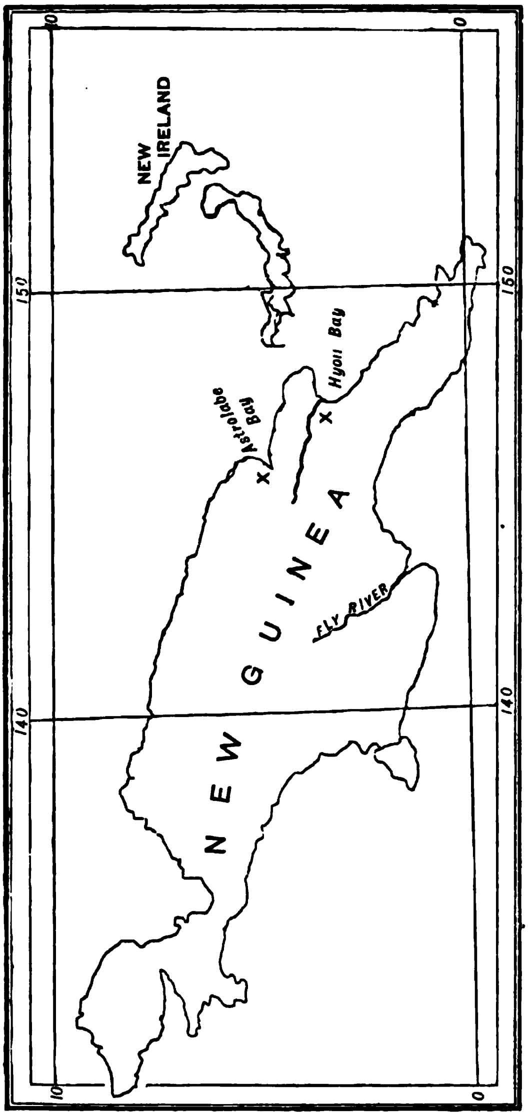
1881	11,591
1882	14,538
1883	12,516
1884	10,504
1885	6,580

And again, taking the returns for the month of April, and for the first four months of the year, we find:

	April.	Jan.-April.
1884	28,391	58,173
1885	20,022	37,347

The above represents the departure of German emigrants from all German ports and from Antwerp.

German South Pacific Acquisitions.—We gather from the *Annalen der Hydrographie* some particulars concerning the new German ports in the South Pacific. Of the islands annexed, the larger ones are all populated, only some of the smaller ones being unoccupied. In New Ireland the behaviour of the natives was suspicious and defiant, although many came on board the German vessels for the purpose of trade; the numerous human skulls found in their possession showed them to be still cannibals. On shore they were decidedly hostile. On the north of New Guinea, the



SKETCH MAP OF NEW GUINEA.

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Johnstone, Charles Andrew (James Woolley, Sons, and Co.), 69, Market Street, City

Jones, W. C., Smedley Villa, Smedley Lane, Cheetham
Jordan, Albert (H. Samson and Leppoc), St. Peter's Square, City

Kennedy, John L., 47, Mosley Street, City
Kessler, William, Somerville, Victoria Park, Rusholme
Kevan, Peter, C.A., 12, Acresfield, Bolton
Kinch, W. S., 59, Portland Street, City
Kolp, N., 69, George Street, City
Knoop, Hy. L. (Schunk, Souchay, and Co.), Peter Street, City
Kullmann, Julius (Kolp and Co.), 69, George Street, City

ALancaster. James, Palatine Square, Burnley
Lane, J. N., High Bank, Didsbury
Langley, H. M., Lloyds House, Albert Square
Larmuth, G. H., 18, King Street, City
Law, Miss Annie E., 79, Peru Street, Salford
Lawrence, J. 70a, Market Street, City
Lawrenson, T. Walt., Technical School, Princess Street, City
Leake, James M., 87, St. James Street, City
Ledsham, J. B., 31, Corporation Street, City
Lee, Henry, M.P., Sedgley Park, Manchester
Lee, Sir J. C., J.P., Park Gate, Altrincham
cLee, H. H., J.P., Bathurst, River Gambria, West Coast of Africa.
Leech, Professor D. J., M.D., 96, Mosley Street, City
Leigh, John, M.D., Town Hall, Manchester
HLesseps, Comte Ferdinand de (Suez Canal Office), Paris
Lings, Charles, merchant, 52, Bloom Street, City
Linton, R. J., Birnam Lodge, Derby Road, Fallowfield
Lively, James T. (R. F. Gee), Duchy Chambers, Clarence Street, City
Lloyd, Albert Hugh, Highfield Road, Stretford
Lord, George, Heathlands, Prestwich
HLorne, The Right Hon. the Marquis of, K.T., President of the Royal Geographical Society, London
Lund, William, Victoria Road, Whalley Range, Manchester
Lynch, Rev. Patrick, 60, Lower Ormond Street, City

cMaples, Rev. Chauncy, Masasi, East Africa
Macfadyen, Rev. J. A., M.A., Whalley Range, Manchester
AMacpherson, Rev. James, The College, Alexandra Road, Manchester
Makin, E., junr., 61, Oak Bank, Radcliffe
Manchester, The Rt. Rev. Lord Bishop of, Bishop's Court, Higher Broughton
Manchester, His Worship the Mayor of, Town Hall, Manchester
Manchester, The Very Rev. the Dean of, Somerville, Pendleton
Marsden, Rev. W., 290, Upper Brook Street, Chorlton-on-Medlock
Mather, William, J.P., Park Lea, Higher Broughton
AMaybury, J. H., 37, Spring Gardens, City
McDougall, A., Gore House, Greenheys
McEvoy, J. W., 76, Palmerston Street, Moss Side
McLaine, James R., 21, Bloom Street, City
McLardy, Samuel, 14, Miller Street, City
Mellin, Ventry de Moleyns, The Polygon, Ardwick
Millington, Miss M., Ellerslie, Victoria Park, Rusholme
Milner, George, Moston House, Moston
Milner, Edward, Springfield, Warrington
AMolesworth-Hepworth, E. N., Holly House, Ashton-on-Mersey
Morris, J., Wood View, New Hey, Rochdale
Munro, Professor J. E. Crawford, LL.D., LL.M., Owens College, Manchester
Murray, Rev. W. Rigby, Victoria Park, Rusholme
Murray, Solomon, 11, Mount Street, City

Needham, J. C., York Street, City
Neild, Alfred, Dingle Bank, Bowdon

Neill, Robert, jun., Beech Mount, Higher Broughton
Newall, Henry, J.P. (Hy. Newall and Son), 10, Marsden Street, City
Nicolson, Allan, (T. Hewit), 19, Corporation Street, City
Nodal, J. H., The Grange, Heaton Moor
Northcote, J. E., 98, King Street, City
Nuttall, H. (J. A. Bremner and Co.), Albert Street, St. Mary's Gate, City

Ogden, S., J.P., 1, Park Place, Halliwell Lane, Cheetham Hill
AOgden, Mrs. M. C., 1, Park Place, Halliwell Lane, Cheetham Hill
AOgden, Miss F. E., 1, Park Place, Halliwell Lane, Cheetham Hill
AOgden, F. E., 1, Park Place, Halliwell Lane, Cheetham Hill
AOgden, J. T., 33, Church Street, City
AOppenheim Sigismund, York House, Oxford Road, Manchester

Parkinson, J. B., 10, York Street, City
Park, Abraham, Albion Independent Educational Institute, Ashton-under-Lyne
Parlane, James, Rusholme
APartington John, cotton waste merchant, Heywood
Paulsen, P. A., 47, Faulkner Street, City
Pearson, James Fildes, 98, Corporation Street, City
APeters, R., West Bank, Tyldesley
Peel, George H., 66, Eccles Old Road
Philip, George, Caxton Buildings, Liverpool
Phythian, Joseph, Temple House, Cheetham
Plant, John, Peel Park, Salford
cPlant, Señor Don Francisco S., Ymamylan, Isla de Negroes, Philippines
Platt, Mrs., Stalybridge
Pope, Rev. W. B., D.D., Wesleyan College, Didsbury
APrice, Bonamy, Professor of Political Economy, Oxford

Rademacher, Hermann A., 77, Charlestown, Glossop
Randall, W. H. (Fisher and Randall), George Street, City
AReade, S. J., Flixton
Reynolds, J. H., Technical School, Princess Street, City
Rice, Joseph, Consolidated Bank, King Street, City
Robinson, Oswald, 109, Princess Street, City
Roby, H. J., M.A., Wood Hill, Pendleton
Roby, Mrs., Wood Hill, Pendleton
Rogers, Rev. Wm. Henry, D.D., Heaton Chapel Rectory, Stockport
Roper, Councillor Henry, Broad Street, Pendleton
Ross, John R., Bank of Bolton, Bolton
Roscoe, Professor Sir Henry E., LL.D., F.R.S., Park Road, Victoria Park
Roux, Leon G. Le, Vice-Consul of France, 17, St. Ann's Square, City
Royle, Dr. P., J.P., 27, Lever Street, Piccadilly, City
Ruscoe, John, Albion Works, Henry Street, Hyde
Rushworth, Councillor James, 215, York Street, Cheetham
Rutherford, Miss Fanny, Lancashire Independent College, Didsbury
Rycroft, John (Richardson, Tee, Rycroft, and Co.), 3, Portland Street, City
ARobertson, John, Cotton Spinner, Stoneleigh, Lees, near Oldham
Robinow, Max, Aytoun Street, City
Rohde, H. A., Claughton House, Didsbury

Sales, Henry H., Ridgefield, City
Salford, The Right Rev. Bishop of, Bishop's House, Salford
Salford, His Worship the Mayor of, Town Hall, Salford
ASalomonson, Edward, 173, Upper Brook Street, Chorlton-on-Medlock
Samelson, Dr. A., 15, St. John Street, Deansgate, City
Samson, Henry, J.P., Brunswick House, Bowdon
Sandbach, James B., Moss Brow, Warburton, Cheshire
Schofield, John W., Thornfield, Old Trafford
Schofield, Joshua K., 42, Lloyd Street, City
Schwabe, Edmund Salis, Ryecroft House, Cheetham Hill

Schwann, C. E. (Schwann, Modera, and Co.), Portland Street, City
Scotson, James, Central Board School, Deansgate
Scotson, James, Green Bank, Ulverston
Scott, C. P., Guardian Office, Cross Street, City
A**Sharpe**, Montroyd, Springfield, Albert Road, Alexandra Park, Manchester
A**Shorrocks**, W. B., 34, Stuart Street, Bradford, Manchester
Simon, Henry, C.E., Darwen House, Palatine Road, Didsbury
Simpson, J. Harvey, 19, Princess Street, Albert Square, City
Skelton, William Henry, Harborough Grove, Ashton-on-Mersey
Skelton, George W., Dudley Lodge, Sedgley Park, Prestwich
Slagg, John, M.P., 39, Hertford Street, Mayfair, London, W.
Slatter, H. R., 74, Everton Road. Chorlton-on-Medlock
Smallpage, Nathan, 86, George Street, City
Smith, Andrew, 375, Oxford Street, Manchester
Smith, William Ford, Woodstock, Didsbury
Smith, F. Heald, 74, Mosley Street, City
Smith, Walter, Ivy Villa, Middleton Road
Snaddon, J., 22, Egerton Street, Hulme
Southern, Councillor J. W., J.P., Store Street Saw Mills, Manchester
Southworth, John, Longsight Villa, Clitheroe
Sowerbutts, Eli, 11, Derby Lane, Cheetwood
Sowerbutts, H. E., J.P., Ribblesdale House, Preston
A**Sowerbutts**, T. W., 11, Derby Lane, Cheetwood
Spencer, Reuben (Rylands and Sons), New High Street, City
H**Stanley**, Henry Morton, Congo
Steinthal, H. M., The Hollies, Oak Drive, Fallowfield
Steinthal, Rev. S. A., The Limes, Nelson Street, Chorlton-on-Medlock
Steinthal, Arthur E., 47, Lower Mosley Street, City
Steinthal, E. F., 47, Lower Mosley Street, City
Stirrup, Mark, F.G.S., Richmond Hill, Bowdon
Stonex, Benjamin J., 23, Walnut Street, Hightown
Sutton, Charles W., Reference Library, King Street, City
Swanwick, Thomas, Leigh Wood, Holland Road, Higher Crumpsall
Sykes, Rd., (Callender, Sykes, and Mather), Charlotte Street, City
Salomonson, H., Oaklands, Victoria Park
Sherratt, Wm., 222, Queen's Road, Rochdale Road, Manchester

Tattersall, W., 19, Albert Square, City
Taylor, Frederick, 11 and 13, Fountain Street, City
Taylor, Alderman E., 24, Yorkshire Street, Rochdale
Thompson, Hargreaves, Rivershill, Ashton-on-Mersey
Thompson, Alderman Joseph, Riversdale, Wilmslow
Thomson, Rev. Alexander, M.A., D.D., 37, Portland Crescent, Plymouth Grove
Thomas, George, 28, Deansgate, City
Thorp, George B., 25, Church Street, City
A**Thornton**, Joseph Smith, B.A., Victoria Park School, Anson Road, Rusholme
Tootill, Ellis, 9, Minshull Street, Portland Street, Chorlton-on-Medlock
Trevor, Wm., Heathfield, Newton Heath
Turner, J. Fox, 18, Booth Street, City

A**Ure**, William, 11, Cannon Street, City

A**Veevers**, Harrison, A.M., I.C.E., The Lakes, Dukinfield, Cheshire

A**Walker**, James M., Hulmes Road, Newton Heath
Walmsley, Clement, 32, St. Ann's Square, City
Ward, Professor A. W., Litt. D., 7, Ladybarn Road, Fallowfield
A**Wardale** Wm., 19, Henrietta Street, Old Trafford
Waters, E. Herbert, Talbot Mills, Hulme
Waterhouse, J. C., High Lea, Alderley Edge
Whalley, John Wm., 63, Mill Street, Bradford, Manchester
Wheeler, Rev. W., 21, Wellington Street, Bradford, Manchester
Whipp, Frederic H., Milltown House, Clitheroe

Whitaker, John Henry, 75, Piccadilly, City
A Whitehead, Wm., jun., 112, Waterloo Road
Whitworth, Alfred H., 70A, Market Street, City
Wilkinson, T. R., The Polygon, Ardwick
Wilkinson, J. F., Pendleton
Williamson, Wm. Henry, 72, Elizabeth Street, Cheetham
Williamson, Robert W., 19, Brazennose Street, City
Wilson John B. (Wilson & Brookfield), The Downs, Bowdon
Wilson, Lawrence, 14, Market-place, City
Wilson, R. M., 55, Fountain Street, City
Winfield, Rev. B., Commercial Schools, Stretford Road
Winmarleigh, The Right Hon. The Lord, Garstang
L Wood, George W. Rayner, J.P., Singleton Lodge, Bury Old Road
Wood, Henry, 7, St. James's Square, City
Wood, Mrs. A. H., 33, Plymouth Avenue, C.-on-M.
Woodward, Wm., Methven, Llandudno
Woolfenden, Joseph, jun., hat manufacturer, Denton
Woolley, George Stephen, 69, Market Street, City
Woolley, Herman, Brookside, Singleton Brook, Kersal
Worthington, James, Sale Hall, Sale
Wrennall, Monsignor Canon, St. Bede's College, Manchester

Zigomala, J. C., Birch House, Kersal
Zimmern, F., 47, Lower Mosley Street, City

EXPLANATION.

H *Honorary.* C *Corresponding.* L *Life.* A *Associate.* * *Affiliated.*

three chief harbours are named Friedrich Wilhelms-Hafen, Prinz Heinrich-Hafen, and Finsch-Hafen, the two first close together in Astrolabe Bay, the latter 140 (marine) miles S.E. in Hyon Gulf. The first named, shut in on all sides, and 10 to 25 metres deep in water, affords excellent anchorage. The islands are low and covered with thick mangrove woods. The land is coralline and nowhere marshy, but the water is muddy. Storms are frequent, and the wind carries from the ground an unpleasant smell of mud. The climate is very unhealthy, producing especially fevers. The thermometer in the day rose up to 30° Centigrade (=86° F.), and at night fell to 25° C. (=77° F.). The natives do not dwell in the mainland, but on the islands, especially Fischel and Aly islands, where there are large villages. At the entrance of the lagune on Eickstadt Island were only a few huts; the natives were very friendly. All wore hats and girdles of *lawa-lawes*, a kind of straw. Prinz Heinrich-Hafen is a little bay to the north, shut in by the coast of New Guinea, Eickstedt Island, and the two isles of Kock and Götz on the east. Finsch-Hafen is not so suited for anchorage as the others. The point of the Flag Peninsula to the south, on which the German flag was hoisted, lies 6° 33′ 5″ S., 147° 50′ 3″ E. The shores are thickly wooded, though here and there are grassy plains. About five miles south is a second deep indentation, stretching E.N.E. to W.S.W. This bay was visited by the steamers, and anchorage found; it lies 6° 36″ S., and 147° 53′ 1″ E., and was named Langemark Bay. These details will be found a useful addition to accounts of the New Guinea Archipelago given *e.g.*, in Mr. Wallace's "Australasia."——The bulletin of the Bourg Society of Geography has a capital article on the subject.——The *Karte des Westlichen Theiles der Südsee* (Hamburg Freiderichsen) shows the area recently taken under German protection. It extends from the Equator to 8° S. Latitude between the meridians 141° and 154° E. Longitude; thus including the large islands, New Britain and New Ireland, which, with the adjacent Admiralty Group, have become the Bismarck Archipelago, and a commanding shore of the north-eastern parts of New Guinea, to be known henceforth as Kaiser Wilhelm Land.

New Guinea.—The Rev. S. Macfarlane, of New Guinea, is writing special letters to the *Melbourne Evening Star* on the work of the London Missionary Society in that island. Two very interesting letters on the Institution for the Preparation of Teachers, and several letters on the Geography and Natural History of the Island have already appeared. Copies of these letters, which are full of interest and information, have been placed in the library.

Borneo.—The Official Gazette (Berlin, of June 22nd) publishes the text of a protocol dated March 7th, 1885, between England, Germany, and Spain, recognising the sovereignty of the latter country over the Sulu Archipelago (Long. 125° E., Lat. 2° S.). Spain renounces in favour of England all her sovereign rights over that part of the mainland of Borneo belonging now or formerly to the Sultan of Sulu, as well as over territories now in the possession of the British North Borneo Company. The protocol contains a declaration of freedom of commerce and navigation between England, Germany, and other powers and the Sulu Archipelago, and provides that no duties whatever shall be levied by Spain upon the ships or subjects of any of those powers. The Spanish Government is, however, permitted to impose taxes, and to introduce sanitary and other regulations. England, on her part, pledges herself to maintain freedom of trade and navigation for all nations, without distinction of flag, in the Borneo Company's territory.

Mineral Wealth of North Borneo.—From a report of Mr. H. Walker, Commissioner of Lands of British North Borneo, it appears that gold exists in considerable quantities in that territory. Some natives had brought a little to Sandakan, and Mr. Walker set out to verify its existence in the Sagama district. He searched thirty or forty different places and found gold at almost every place, generally in small distinct specks, large enough to be gathered with the fingers, sometimes larger, and always in conjunction with a black metallic dust and iron or copper pyrites. The rocks met with were granite, gneiss, quartz, limestone, jasper, porphyries, red sandstone. Steps will probably be taken to have the whole region thoroughly examined by a competent geologist. The minerals already ascertained to exist in North Borneo are gold, silver, copper, chromium, tin, plumbago, lead, and coal. Antimony and cinnabar are reported. On the west coast chromium, copper, and arsenic have been found; in the neighbourhood of Kinabalu silver ore and pyrites; a sample of native copper has been sent to London; a rich sample of galena and silver, yielding on assay 115 ounces of silver to the ton, has been found. Hitherto the officials of the company and the other Europeans on the coast have been dependent on the rough statements of natives for local information respecting these and other minerals. It appears certain, however, that, besides its great forest and agricultural wealth, British North Borneo is also rich in minerals—how rich cannot be said until a thorough examination by an expert has been made.

Geography of West China.—In the last number of the *Muséon**, M. Gueluy commences the translation from the Chinese of an important native work on the geography of West China. In his interesting introduction, the translator points out the great difficulties in the way of studying Chinese Geography: "The Chinese pronounce their characters differently according to different localities, (*e.g.*, in two towns near Kan-Su, we hear both *chouei* and *fée* for 'water'; the names of the towns are often manifold; they may change with time." Moreover, the Chinese have the habit of substituting (or adding) Chinese names for Tartar ones. All this renders maps of the regions in question, whether native or foreign, extremely unreliable The work translated by M.Gueluy is entitled *Si iu Wenn-Kien lu*, or, "Description of what I have seen or heard of the Western Countries," the author being one Chouen-nieun, who wrote in the year 1778 of our era. The first part has reference to "our territories beyond the Great Wall," and in six chapters treats of the 'Snowy Mountains,' and the districts called Hami, Barkoul, Ouroumtsi, Ili, and Tarbagatai. The work is full of curious details, both of geography and natural history.

The Future of China an "Unsolved Riddle."—The eminent traveller Baron Alexander von Hübner, formerly Austrian Ambassador at Paris and Rome lately delivered in Vienna a most important and interesting lecture on the "Unsolved Riddles and Mysteries," as he styles the questions relating to the "awakening of China." Speaking of the "opening up" of China, the breaking down of the wall which separates 400 millions of men from the rest of the world, he continues: "It was desired to open China to Europeans, but the result was that the earth was opened to the Chinese. Who travels into the interior of China besides the missionaries, who are there already in disguise, besides a few explorers? Nobody. But the Chinese are streaming over a great part of our earth; they even colonise—of course, after their own fashion. Extraordinarily gifted—though inferior to the Caucasian in the higher spheres of intellectual activity—indefatigably energetic, a born trader of proverbial honesty, an agriculturist, above all a gardener of the first rank, distinguished in all branches of manual labour, the son of the Middle Kingdom is slowly, continually, and imperceptibly driving back the European wherever he meets him. I speak only of what I have seen myself. In 1871 the whole English trade with China—which amounted and still amounts to £42,000,000—was in the hands of English houses, the four great firms, one of them American, in Shanghai and Hong Kong, the smaller ones in the treaty ports. Besides, there were the middle men. Only the carrying of English imports into the interior of the empire was in the hands of native merchants. In addition, the firm of Russell possessed over twenty steamers, which kept up the trade between the treaty ports and plied on the Yang-tse. At present, with the exception of a few great English firms, the entire trade is in the hands of Chinese merchants, and Russell steamers are in the possession of Chinese companies. (These steamers have recently returned to Christian hands, but only to secure them against the French.) In Macao, which has been nearly 400 years in possession of the Portuguese, may be seen magnificent palaces, many dating from the 16th century. They are in the best quarter of the town, in which the Chinese are not allowed to build houses, nor have they done so; but the greater part of these palaces have come by purchase into the hands of rich Chinamen, and are inhabited by them. At my first visit to Singapore, in 1871, the population consisted of 100 white families, 20,000 Malays, and a few thousand Chinese. When I saw the town again at the beginning of last year, the population was divided, according to official returns, into 100 white families, 20,000 Malays, and 86,000 Chinese. A new Chinese town had risen up, with splendid shops, beautiful dwelling-houses and pagodas. I thought myself transported to Canton. The southern point of Further India, the lands lying between Siam and the Indian Ocean southwards of Burmah, which, but a short time ago, were almost unpopulated, are filling with Chinese. The number of the children of the Celestial Empire who emigrated to those localities and landed at Singapore in 1882, amounted to 100,000; and in 1883 to 150,000. An important increase was anticipated last year. The Draconian laws, by which it has been attempted to get rid of these unpleasant competitors in California and Australia, are well known. These laws, which are in crying contradiction to the philanthropic principles of the equality and fraternity of all races, remain, notwithstanding their strict application, a dead letter. I never met more Chinese in the streets of San Francisco than last summer. In Australia, the Chinese element is ever growing in importance and extent. A man who does the same work for half price opens all doors before him. Even in the islands of the Pacific the Chinese influence is already making itself felt. The trade of the very important Gilbert Islands is in the hands of a great Chinese firm. In the Sandwich Islands the Celestials are every year gaining ground. The North Americans, who hitherto have been the masters of these islands, under the rule of the native King of Hawaii, already feel the ground giving way beneath their feet. The Chinese are driving them slowly out. All that I have said hitherto on this subject I have seen with my own eyes. Chili and Peru alone I have not visited; but I learn from official documents that since 1860 200,000 Chinese have immigrated—an enormous number compared with the thin European population of those lands. Europe with her 300,000,000, China with her 400,000,000, are leaving out India, the two great over-populated regions of the earth. Both are sending their children into distant lands: two mighty streams, the white and the yellow. Since the days of the first migrations of the peoples, history has known no such movement of enormous masses. A string of questions press themselves upon us. What will be the condition of the old continent after sending away so many of her sons? Will she, now suffering from excess of blood, after so great a blood-letting, again enjoy full health, or, like Spain, fall a victim to anæmia? Who knows what future awaits the young, striving, rising states of Australasia, which are neither kingdoms nor republics? What reaction will they exercise upon the mother country and upon Europe? We know not. What will be the consequence of the meeting of those two streams, the white and the yellow? Will they flow along peacefully in parallel lines, or will they, by their hostile encounter, produce a state of chaos? We know not. Will Christian society and Christian civilisation in the present form disappear? Will they come forth victorious out of the conflict, and carry their eternal principles, living and fructifying, over the earth? We know not. These are unsolved riddles; these are secrets of Providence, which still rest hidden in the bosom of the future. What we hear are but the first tones of the overture of the great drama of coming times. The curtain is not yet raised. The action will take place in the twentieth century."

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* Tome iv., No. 2, Mars, 1885.

The Cradle of the Aryan Races.—In a paper read before the Antwerp Geographical Society,* the distinguished Belgian orientalist, Rev. J. Van den Gheyn, M.R.A.S., discusses in full the remarkable theories lately put forward, or rather revived, by Schrader (Jena, 1883), Penka (Vienna, 1883), Von Löher (Munich, 1883), and Tomaschek of Gratz (in the *Ausland*, and at the Leyden Congress, 1883), regarding the *European* origin of the Aryan races. Of these ethnologists, Dr. Penka maintains that Scandinavia was the cradle of our Aryan forefathers, whilst Tomaschek inclines to White Russia, and the Volga regions. Although originally suggested by Dr. Latham, as far back as 1862, the idea is still somewhat startling to people accustomed to look to Asia as the first home of the Indo-European tribes. M. Van den Gheyn valiantly combats the new theory, and whether his readers agree or not with him, they will nowhere find a more complete and detailed account of all the various arguments—ethnological, linguistic, historical, geographical—put forward by the numerous writers on both sides, than in his excellent pamphlet (*L'Origine Européenne des Aryas.* Anvers, de Backer, 1885), for which Messrs. Trübner and Co. are the English agents.

South Sea Slave Trade.—A letter from a special correspondent appeared in the *Scotsman* newspaper of June 11th, 1885, containing some very painful particulars in relation to this terrible trade. The letter may be referred to in the library.

The New British Colony of Bechuanaland.—This new colony added to the British possessions this year, equalling Spain in area, and situate in the very heart of temperate Africa, lies west of the Transvaal and the Orange Free State and is bordered on the west by the line of the twentieth degree of East Longitude. It is a plateau lying for the most part between 4,000ft. and 6,000ft. above the level of the sea, and the climate is favourable to Europeans, the natural heat of a country lying between the 20th and 30th parallel of latitude being tempered by its considerable elevation above the sea. There is a fair mixture of wood and plain, there is much good soil, and in the valleys Indian corn, millet, and wheat are grown by the natives. Some gold has been discovered in the Sitlogoli River, and judging by the geological structure of the country, coal may be looked for. Several experienced miners connected with Sir C. Warren's expedition are likely to remain in the country to try to find the iron, copper, &c., which is thought to be present.

Soudan.—A very valuable article on the southern boundary of Egypt, full of historical references, appeared in a recent issue of the *Manchester Guardian* (May 29th, 1885), which will well repay reference and consideration by the members.

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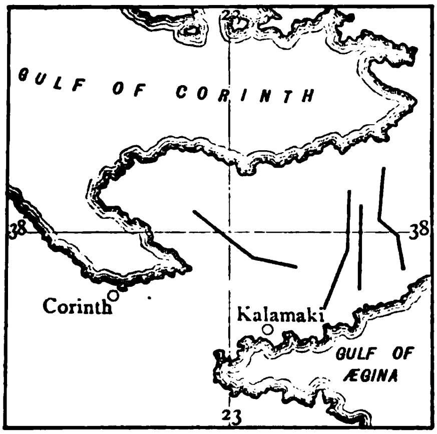
* Bulletins de la Société Royale de Geographie d'Anvers, 1885.

Isthmus of Corinth.—It is a good time since we heard of the projected canal through the Isthmus of Corinth. We now learn that the work is actually in progress. Two colossal dredging machines, the Isthmia and Poseidon, whose construction at first was found to be faulty, have been altered and thoroughly adapted to the work, and are now in full activity. The Poseidon began in January on the side of Corinth, whilst a fortnight later the Isthmia started work near Kalamaki, on the opposite side of the isthmus. Each of the dredges is of 300 horse power. The principal chain carries 24 buckets each capable of holding 750lb. of earth, so that each dredger ought to be able to remove 500 cubic metres of mud per hour. But the variable nature of the soil renders the work much slower. In any case, it is felt to be certain that the entire work will be completed in the stipulated time—three years hence—when we may confidently expect to see a much shorter route to the Eastern shores.



SKETCH-MAP OF THE ISTHMUS OF CORINTH.

Brazil.—A Brazilian resident in Brussels has just issued, on occasion of the Antwerp Exhibition, a very interesting and valuable pamphlet entitled, "Le Brésil au point de vue commerciel et industriel, d'après des documents officiels et les plus récents statistiques,"[*] from which we extract a few miscellaneous items. With an area estimated at 8,337,218 square kilometres, Brazil is about sixteen times the size of France and Belgium, and as a vast empire ranks immediately after the Russian, Chinese, and British empires. The climate is excessively hot and moist during the rainy seasons, especially the tropical regions; outside of these it is dry and more temperate. This vast region is comparatively little peopled; there are only 12,000,000 inhabitants. Were the density of population equal to that of France, there ought to be at least 70,000,000. Three races make up the population: the European race, the Indians, and the half-breeds. About 300,000 foreigners are reckoned to live in the Empire, about one half being subjects of the Crown. Among the details given concerning government, education, &c., we note that Brazil possesses 200 newspapers, of which 38 belong to the capital; the most important being the *Journal do Commercio*, with a daily circulation of 20,000. The extraordinary and almost fabulous mineral and vegetable wealth of Brazil is thus indicated: Whilst in Europe, wheat and rye yield about 15 to 20 per cent, in Brazil the yield is as high as 70 per cent. There are districts where, for a surface of 19 or 20 *ares* (about two roods, or ½ an acre), the yield is of cotton, 800 to 900 kilograms (1,760 to 1,980lbs.); of coffee, 600 kilos., or 1,320 lbs.; of maize, 49½ bushels; or of manioc (which yields tapioca), 99 bushels. One *hectare* (about 2½ acres) allows the growth of 4,500 plants of cotton, and may yield as much as 4,400lbs. The vine is successfully grown in the four or five southern provinces. Coffee is the staple Brazilian product. Its production and its consumption (the latter notably in France and Belgium) are increasing. Since 1878-79 the price has lowered, simply owing to economic conditions. The supply is so great as to far exceed the demand. The following shows the

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[*] Bruxelles: Imprimerie des Travaux publics, 6, Rue du Poinçon.

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rapid growth of exportation: In 1800 Brazil exported 82 kilos; 1840, 19,000,000; and now exports 360,000,000. All other coffee-producing countries together do not export more than 300,000,000 kilos. The characteristic beverage-producing plant, however, not yet used in Europe, is *Maté*, the leaves of the South American ilex. Like coffee, it contains three elements: an alkaloid, essential oils, and resinous gums. The alkaloid is greater in quantity than in tea or coffee, but it is especially in the gum resins that it is richest. *Maté* does not affect the nervous system to the same degree as tea or coffee, and is much cheaper, as in Brazil 15 kilos (or 33 lbs.) sell for 7 to 10 francs, and each kilo will supply about 70 pints of the infused beverage. The writer of the pamphlet hopes to see *Maté* introduced into Europe, and a great demand spring up for it. The arrival of immigrants at Rio de Janeiro has increased in the following proportions: 1870, 9,123; 1877, 29,027; 1883, 30,000.

The Merchant Navies of the World, 1883.—The *Bureau Veritas* has published the following comparative statement of the merchant navies of the world in the year 1883. It will be seen that England is credited with nearly one-half of the whole tonnage, our merchant navy being nearly equal to that of all other countries combined. Than this nothing could be more eloquent as to the magnitude of our shipping industry, nor more suggestive of the necessity of caution on the part of the Legislature in dealing with it:—

	Steamships.		Sailing Ships.		Proportion per cent. of Tonnage.
EUROPE.	No.	Tonnage.	No.	Tonnage.	
Austrian	94	81,242	538	210,919	1·5
Belgian	52	62,039	27	8,544	0·4
Danish	145	70,511	1,160	181,341	1·2
Egyptian	18	12,344	—	—	—
English	4,469	3,822,708	17,875	5,271,160	46·3
French	458	444,265	2,434	452,316	4·6
German	420	345,103	2,614	894,558	6·4
Greek	47	25,555	1,865	362,891	1·9
Dutch	127	106,482	1,153	332,519	2·2
Italian	135	111,548	3,084	915,049	5·2
Norwegian	209	77,057	4,003	1,366,941	7·4
Portuguese	20	11,673	458	109,430	0·6
Roumania	1	111	21	8,636	—
Russian	194	98,052	2,131	468,272	2·8
Spanish	282	200,100	1,544	308,779	2·6
Swedish	252	72,211	1,950	399,602	2·4
Turkish	10	5,759	402	65,325	0·4
AMERICA.					
Central America	18	5,187	119	32,191	0·2
North America	422	374,314	6,214	2,099,218	12·6
South America	102	48,816	324	113,466	0·8
OTHER COUNTRIES.					
Asiatic	105	57,237	151	48,548	0·5
Liberian	—	—	4	2,545	—
Tunisian	1	726	2	188	—
Zanzibar	1	720	—	—	—
Divers	2	3,584	1	439	—
Total	7,764	6,037,164	48,074	13,647,877	100·0

Railway Extension.—According to the statistics published by the German Ministry of Public Works, the total extension of railways on the earth from 1879 to 1883 was 92,168 kilometres, or 26 per cent. In 1883 the total length of railway wa 442,199 kilometres, or 274, 160 miles, divided thus:—

America	132,161
Europe	113,306
Asia	11,552
Australia	6,531
Africa	3,518

As regards *growth* of railway system, the percentage for the four years is as follows :

	Per cent.
Australia	52·1
America	41·1
Africa	25 9
Asia	25·8
Europe	11·1

The extent of the railways in the different European countries is as follows (all in kilometres) :—

	1879.	1883.
German Empire	31,094	35,810
United Kingdom	28,491	29,890
France	25,183	29,688
Russia	23.400	25,121
Austria-Hungary	18,335	20,598
Italy	8,343	9,450
Spain	7,135	8,251
Sweden	5,605	6,400
Belgium	4,012	4,269

As regards comparative increase during this period, Greece heads the list with 100 per cent, and Norway with 51·2 per cent; Great Britain comes last of all, with only 4·9 per cent. The most remarkable development is that of America, which in 1879 was 1,500 kilometres *behind* Europe, and in 1883 was 41,500 *ahead*. Of the total, the United States claims a percentage of 42 growth; next are Mexico, British America, and Brazil. In Asia, three-fourths of the increase belongs to British India. Belgium is most densely covered with the railway net, where the relation of railway length to surface is 14·5 to 100·9; but according to population, Sweden is the best off, having 14 kilometres to every 10,000 inhabitants.

NOTICES TO MEMBERS.

Subscriptions.—The Members will greatly oblige the Council by paying at once to the Treasurer their subscriptions and any donation they may be pleased to make towards the preliminary and furnishing expenses.

The Council trusts to have a prompt response to this intimation.

Library.—A considerable accumulation of very interesting and valuable matter is now in the Library, which is open to members from 10 a.m. to 4 p.m.

Map of Africa.—A second edition of the Map of Africa corrected up to May 31st, may be had (unfolded) on application at the Library, which may replace the map issued with the last number of the Journal.

The Journal.—Members are reminded that they can be supplied with extra copies of the Journal at half the published price, and as the issues will not be reprinted, they will become scarce. Early application for additional copies is desired.

Education Committee.—This Committee will be glad to receive any communication in relation to the present condition of Geographical Education, the methods of teaching, and the apparatus in use in primary, private, secondary, or high schools or elsewhere, or any suggestions for improvement herein. And the Secretary will gladly receive any books or maps illustrative of the question for the use of the Committee.

List of Members.—With this number of the Journal is given a list of members of the Society. Any corrections or alteration of address will be received by the Secretary and duly attended to.

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40
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C. Britannia
Osborne
all Land
Petermann Fiord
gton L.d
field L.d
L.d
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Hayes Pen.a
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THE JOURNAL

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MANCHESTER GEOGRAPHICAL SOCIETY.

SIAM AND THE SHAN STATES.*

BY MR. J. ANNAN BRYCE, OF LONDON.

[Delivered before the Members of the Society at the Manchester Athenæum, May 12th, 1885.]

THE title I have given to my paper, which I am to have the honour of reading to you, sufficiently expresses in a general way the limits of my subject, but I shall direct my attention more particularly to those countries in so far as they are inhabited by the Shan race itself, and especially to those parts inhabited by the Southern Shans, that is, to Siam proper and the States subject to it.

Such being the general scope of my paper, I shall speak to you first of the country itself, its physical features and productions, and then proceed to tell you of its people.

If you will look at the map you will see the boundaries of the country, which on the east and north are ill defined, and that it is wedged in between English territory on the west and French on the east.

As regards the area of Siam and its dependencies, estimates vary between 190,000 and 290,000 square miles. It is probably about 250,000 square miles, or rather more than twice as large as the United Kingdom.

While in India the general run of the mountains and valleys is from east to west, to the east of the Bay of Bengal the general run of the mountain chains and of the parallel river valleys between them is north and south.

In its continental part the Siamese kingdom extends over portions of two great river basins, those of the Salween and Meh Kong, and embraces the whole of a third, that of Meh Nam.

The basin of the Salween is entirely mountainous and forest covered, as is a great part of the Meh Kong basin within

---

* See large map of Siam, &c.

Siamese territory. With the Meh Nam it is different. Not only does it flow through a more level country from the outset, but the whole of its fertile delta is within Siam.

Of the geology little is known, but it may be of interest if I tell something of what I myself saw on the part I traversed.

Roughly speaking, the main formation on the Salween side is a blue and very hard limestone, with occasional beds of calcareous sandstone, the general strike being north and south. In this limestone are magnificent caves, which would probably yield a rich harvest to an explorer like Professor Boyd Dawkins. Near the main axis of the range between the Salween and the Meh Nam drainages, the limestone becomes highly crystalline, and I found beds of slate, the relation of which to the other strata it was impossible to make out in the absence of a section.

The axis itself is a grey granite, with very large crystals of felspar. On the eastern side of the range this rock generally shows more bedding, till it might be called a gneiss, but its constitution appeared unaltered. When the Meh Ping, a western branch of the Meh Nam, was reached at the bottom of the descent, I found to the west of it, extending for many miles, a sort of range of hills, some of them rising 600 feet or more above the plain, composed entirely of pebbles, apparently the debris of a riverine conglomerate. As the course of the Meh Ping to this point is too short to allow of its having collected these vast masses of pebbles, there must be some other explanation of their existence.

After leaving the plain of Chiengmai the river flows through a mass of mountains, and they are of an average height of 2,000 to 3,000ft. This mass is limestone, of much the same character as that on the western side of the chain, and it overlies the granite or gneiss just on the level of the river. The bed of the river is everywhere granite, and the two sides, from below the water's edge, everywhere limestone, the width of the channel being often only a few yards. In fact, the river has cut through the limestone to the granite, but has found the latter too tough a customer to negotiate. In all this passage through the mountains the scenery is magnificent. The channel is extremely narrow, in fact a mere gorge, and as the boat is swept on from rapid to rapid every moment new scenes of grandeur present themselves, cliff succeeding cliff, and slope, slope, some bare and vertical, some streaming with stalactites, marking the waterfalls of the rainy season, some crowned with trees, some clothed to the top with luxuriant vegetation among which a handsome euphorbia was prominent, while every damp spot is draped with maidenhair of the tenderest green.

Below the emergence of the river from this region the limestone disappears in mass near the river, but the granite continues to form both the bed and the low hills near the banks till near the delta, when rock *in situ* ceases to appear. But in several places below the junction when isolated hills appeared at some distance from the banks, I judged them, from their close resemblance in shape to the hills near Moulmein, to be limestone, and there can I think be little doubt that the mass through which the river forces its way is like these isolated hills, but a remnant of a formation which once overspread the whole region.

From notices in M. Mouliot's account I gather that the range dividing the Meh Nam from the Meh Kong is mainly limestone, but he speaks also of calcareous and other sandstones, and another traveller speaks of crossing limestone ridges on his way from Chiengmai East, *via* Lakon, to Muang Nan.

The country to the S.E. of Bangkok, on the coast, appears from Mouliot's account to be metamorphic under the influence of volcanic action, and it is in that district that the mine of sapphires is worked, which, by flooding the market, has so reduced the value of that beautiful stone. Other precious stones and almost every metal of value is found in Siam—gold, silver, copper, tin, lead and iron, all occur, it is said, in abundance, and the country only wants capital to develop these and its other resources.

Before I go on to describe the vegetation of this region it is necessary to say something of the climate and the rain supply, because in tropical countries the most fertile soil is useless without water, the growth of all crops depending on the receipt of moisture, either in the form of rain or from irrigation.

Everyone is familiar with the monsoons and their causes, and it need, therefore, only be said that, in the part of Indo-China, with which we are concerned, the dry and the rainy monsoon are the same as in the greater part of India, that is to say, that the dry monsoon is the N.E., which blows unceasingly in the same direction from the middle of October to the middle of April, and the rainy monsoon the S.W., which blows unceasingly from the middle of April to the middle of October. But everyone may not be familiar with the interesting results which follow from certain configurations of the surface. When clouds laden with rain pass over a range of hills which is able to condense them they deposit the bulk of the moisture they part with at that particular time on the side nearest the direction from which they come. If there be a wide space on a lower level between the first and the second range the clouds will often pass over to the second range to leeward, without depositing any rain on the intermediate plain to speak of, and again condense in heavy rain on the second range. Now this is what happens, both in the case of the valleys of the Irawadi and the Meh Nam. The rain supply of Siam comes almost entirely from the Bay of Bengal.

It will be seen from the map that the rain clouds, coming with the S.W. monsoon, have to pass over the great chain which divides Burma from Siam, and forms the backbone of the Malay Peninsula. This chain, on its western side, has a rainfall of from 250 to 400 inches, while the plain of Siam behind it has in many parts but a very few inches, and the chain to the east has again a heavy rainfall. The result is that there is little cultivation in the Meh Nam valley out of the reach of the inundations of the river or of the irrigation which it can supply.

On the plains by far the most important crop is rice, which forms the staple food of the people. The delta of the Meh Nam is one vast rice plain, with clumps of bamboos and fruit trees surrounding the villages, and lines of bamboos, trees and tall reeds fringing the water courses. The rice crop is planted about July, after the first rises of the river have flooded the land, and harvested about December.

In years of good rain supply, there is a considerable surplus for export, and in some years more than a million of pounds' worth has been sent out of the country. But in some years the supply is barely sufficient for the country itself, and export is prohibited. When there is an export it is mostly to China and the Archipelago, for Siam rice is inferior to that of Burma, and it is only when the Burma supply is short that the Siam rice has a chance of being taken in Europe.

Sugar is also cultivated, the juice being extracted by a simple mill of wooden rollers worked by a bullock, and then boiled down in pans. Planting and milling on scientific systems has also been tried but has been only moderately successful.

Pepper is now largely grown in the moist hot regions round the Gulf of Siam, and coffee is being tried.

Cotton is grown in the States subject to Burma and to some extent on the mountains of the Upper Meh Nam Valley.

All the tropical vegetable and fruits flourish well. Among the latter the banana, the cocoa-nut, the betel-nut, the orange, the lemon, the custard apple, the pine-apple, the shaddock, the mango, and the Chinese Lichi are prominent, but the most remarkable are the mango stone and the dorian, which are characteristic of the regions about the Malay peninsula, and as neither of these will carry to any distance, you must go there to taste them.

The former the mango stone is one of the most delicate and seductive of the world's fruits. It is about the size of a small Tangier orange, with a very thick woody rind of a beautiful madder brown colour. Squeezing this open you will find inside a small round mass of white pulp which melts in the mouth with a flavour of ineffable delicacy. As the fruit is a wholesome astringent it can be eaten freely with safety, and it is difficult to to know when to stop.

As the mango stone is one of the most attractive, so the dorian is to the stranger perhaps the most repulsive of fruits. The dorian is a large fruit and has a thick rind of a bright green colour, possessing a most abominable odour. Try to imagine a combination of all the worst smells you have ever experienced, with that of gas-tar predominating, and you will have a very faint conception of its horror. The most evil-smelling continental town is nothing to it. So much for the outside. When you break open the rind, you find a cavity in which lie a few large seeds surrounded by a white creamy stuff. It is this that is eaten. The smell of it is perhaps hardly so bad as that of the rind, but the taste, though luscious, is at first revolting enough. But there is a kind of ghastly fascination about it, and even Europeans in time become as passionately fond of it as the natives. How fond the natives are of it may be imagined when I say that the King of Burma—the fruit does not grow in Upper Burma—keeps steamers running in the season between Rangoon and Mandalay without a stop, with nothing on board but dorians.

In the dry regions of the north, where little rain falls, the land, which can neither be inundated nor irrigated, is mostly covered with a dry thorny scrub, and where the soil is deep with an open forest, of which teak forms a part.

On the lofty mountains where the rain-clouds are condensed, the forest is often dense and tangled, and the trees grow to a great size. Through this forest it is in places impossible to force one's way, so close is the undergrowth of canes, creepers, and bamboos, some of which grow to the height of 90 or 100 feet. In the damper parts of the forest there is a good deal of evergreen wood, but the great mass of the trees are deciduous.

Nothing can be more beautiful than the forests in these regions before the fall of the leaf. A very large proportion of the trees have brilliant flowers, many of them loading the air with scent.

Below tree-ferns —I saw two species—and cycads spread their tufted crowns, and bamboos wave their feathery sprays. Aloft the trees are encrusted with innumerable orchids, some stiff and erect, others trailing long flower stems, full of bloom, towards the ground. The orchids bloom at different seasons, but it is in the hot weather, after the fall of the leaf in February that most of them are in their glory. For then they can be seen from afar by the insects which fertilise them.

At this season a series of fires rage through the forest, forming a magnificent spectacle at night, as they sweep in long lines along the hill side, but unlike the great conflagrations in the resinous pine forests of America, which destroy everything in their course, these fires, though they often check and distort the younger trees and consume dead and felled ones, do little damage to living trees of large size. As the traveller looks up through the suffocating smoke of these fires he sees the bright colours of the orchid's blooms far above him on the tree tops.

Of all the forest products by far the most valuable is teakwood, which, as you know, is largely used in this country in the construction of iron ships, and which is the most useful building wood in the East, owing to its power of resisting the white ant.

Though the teak of Siam is considered inferior to that of Burma, it has of late years been worked to a considerable extent.

The teak tree flowers in August, when its large, white, sweet-scented panicles of bloom, very much like a meadow-sweet in colour, are a great beauty in the forest landscape, and serve to mark out the position of the tree to the keen eye of the forester.

Under favourable conditions the tree attains great size and age. For export it is not cut under a girth of six feet, which means 100 years in age.

The cutch tree also grows in the northern part of the Meh Nam Valley, but owing to the cost of carriage it is worked only for local use. Cutch is an article largely imported into England, though, perhaps few know it by name. But everyone must be familiar with it unconsciously in the beautiful brown dye which it gives to silks and cottons, and in the colour of fishermen's nets and sails, which, being one of the most powerful antiseptics known, it preserves from rotting under exposure to wet. For the sake of its astringent properties it is used to some extent in medicine, going in the Pharmacopœa by the name of *Terra Japonica* or Japan earth, the nature of the product not having been understood, nor its origin known, when it was first imported.

In the East, for the sake of the same astringency, it is used for chewing along with betel nut. The tree is an acacia and often grows to a great size and age. To prepare the cutch the tree is cut down, the sapwood taken off, and the dark heartwood, whittled into chips, a work of great labour. These chips are then boiled with water—this part of the work being done by the women and children of the cooking party—till the juice is extracted, and this is then evaporated in shallow pans, and when it has got thick is poured out into a mould to cool and harden.

Sapan wood, another dye stuff giving a red colour, and also the produce of a leguminous tree, is exported in some quantity to Europe.

Gum benjamin, or benzoin, a gum largely used for making incense is produced by a shrub which I saw growing on the mountains above Chiengmai, but the chief supply of it comes from the forests in the north east, near Luang Prabang or the Meh Kong.

Sticklac is produced abundantly in the Shan forests. It is the secretion of an insect which deposits it on the twigs of certain trees, as a home for its eggs. From sticklac are obtained shellac, largely used in the arts, and a beautiful red dye, called lac dye, which like madder, has been superseded by the aniline dyes.

Another forest product is the celebrated black varnish, formerly largely used in Europe, of which the beautiful lacquer work of Burma and Siam is made.

And among many other vegetable productions of local value, there is of course the bamboo, put in Siam as elsewhere in those regions to every conceivable use.

On the mountain tops are great stretches of noble pine forests. I saw two species but they are too far from water carriage to be of value for export.

On the mountain above Chiengmai I found an acorn, but could not discern the oak from which it came.

Of European plants there are of course few. One I did find growing abundantly as I have found it almost everywhere I have been in the world, the common bracken. And growing in mountain rills among the granite I saw a beautiful little sundew, very like our own *drosera longifolia.*

Among animals, the tiger, leopard, rhinoceros—the horns and blood of which are prized as medicine—various kinds of deer, and wild cattle abound. But of the characteristic tropical animals, the elephant is the most prominent. In the Shan country, every villager of any substance has one or more, and they are used not only for riding, but as ordinary beasts of burden. For travelling they are indispensable, no other animal being able so well to cross rivers, mountains, and pathless forests. It is wonderful to see the way the huge creature manages his unwieldy bulk on a slippery descent, or on an almost vertical upward slope. But as a mode of locomotion the elephant, though indispensable, is by no means agreeable. His motion is a peculiarly unpleasant compound of a pitch and a roll, and perched on an insecurely fixed car, one has always the risk of being precipitated—it may be down a cliff—should a casual branch catch the car, or the girth give way under a particularly violent lurch.

Notwithstanding his size, the elephant is a timid creature, and as the driver has control only by a goad, he sometimes loses command altogether. So I always walked when I could, but even thus did not always escape danger. Once, on a narrow path in the mountain, when I was walking close in front of the elephants, the leading one took fright at the sudden appearance of a bullock from a side path, set up a roar, and charged at full speed down the path. On each side there was an impenetrable bamboo jungle, so there was nothing for it but to rush on in front of him. Favoured by the steepness of the path I managed to outstrip him. Very comical are the baby elephants which accompany their mothers on a journey, squalling when they are crossed or frightened just like a spoiled child. It is a common error to suppose that the elephant does not breed in captivity. They do so constantly, and even a saw-mill elephant will bring forth young. Two young elephants now performing in this country were born in a saw-mill at Moulmein, and when of a tender age were playfellows of mine.

And now to say something of the people. There live in Siam and dependencies many tribes, all apparently belonging to the same original stock, but now differing widely in language, religion, and civilisation. Of these, the less civilised, the Karens, Kamoos, Lawas, and many others now inhabit the mountainous districts, having been driven there apparently by the later immigration of the ruling race, the Shans, whose original seat appears to have been South-West China. The whole southern region, from the Bay of Bengal to Cochin China, seems before the immigration to have been occupied by the race called by ethnologists the Mon Anam family. Coming from the north the Shan race wedged itself into the middle of this family, splitting it into two presently existing branches, the Peguans or Talains, whom the Shans call Mons, and the Anamites. The Shans spread themselves not only over the valleys of the Meh Kong and Meh Nam, but also over the upper valleys of the Brahmaputra, the Irawadi, and the Salween.

In Upper Burmah it may be a matter of doubt whether the Shans or the Burmese were anterior; but, however that may be, they are probably to this day in the Upper Irawadi Valley in greater numbers than the Burmese themselves. Politically the Shans are very much divided. Those in Assam—or Khamtis as they are called—are under the government of India. Those living on the Upper Meh Kong, and the northern tributaries of the Irawadi, on its eastern side, are subject to China. Those who inhabit Burma proper and the middle Meh Kong owe allegiance to the King of Burma, some paying tribute to China also; while those who dwell on the lower Meh Kong and upper Meh Nam, and who are distinguished as Laos, as well as the Siamese proper, are under the dominion of the King of Siam.

The word Shan, or Sciam, is the generic word applied by the Burmese to the whole race.

The Shans call themselves Tai, distinguishing various branches as tatooed and non-tatooed, long haired and short haired, great and little, and the like. In face and figure the various branches differ little. They are, speaking generally, a well-grown athletic race, bigger and more fleshy, as an American would say, than the Burmese and Talains. Both men and women have often magnificent figures. In complexion they are fairer and clearer than either Burmese or Chinese, and in Chiengmai, many of the women have nearly white complexions, with rosy cheeks. They have broad round faces, with large almond-shaped eyes, slightly deflexed at the inner corners, but hardly so much as either the Chinese or Burmese, small, rather flat, noses, and widish mouths, with thick lips, which are often opened in a broad grin, for the Shan is naturally a jovial simple fellow, always ready for a laugh. They are sometimes described as indolent and apathetic, hardly a fair description, I think, of the Northern Shans, who push over immense distances all through those obscure regions in pursuit of their favourite occupation of peddling. But they certainly have not the intermittent vigour of the Burmese, or the steady patient plod of the Chinese, who are gradually ousting them in Siam proper, and penetrating far up into the Laos States. And this absence of force no doubt explains to some extent their political separtion and helplessness as a race.

Such differences of appearance as there are between the various branches of the race are due more to dress than to physical variation.

The Siamese, both men and women, wear round the waist a piece of cloth—dark green is the favourite colour—the ends of which, being taken between the legs, are tucked up behind so as to have the general appearance of a pair of short tight drawers; this garment is called the panoung. On their bodies when they wear anything, which is not often, it is a scarf thrown over the shoulders, or a short jacket of cotton or silk. The higher classes, on ceremonial occasions, often wear dress of European cut, generally of white drill or jean.

In former times the men shaved and women cut their hair close, except a patch on the top, which was allowed to grow about two inches long. This coiffure—the hair being black and stubbly—looked exactly like a grate brush. Some of the women still maintain this delectable style of head dress, but the men have mostly abandoned it for the ordinary European style of hair cutting. The common people of both sexes go barefooted, but the higher classes wear stockings and shoes on most occasions.

In the Laos States, subject to Siam, the men's dress is exactly like that of the Siamese, except that they all tatoo from the waist to the knees, and all, except the princes, wear the grate brush, the princes following the Siamese in adopting the European hair cutting.

The women in the Laos States, however, have a totally different and much more graceful dress than the Siamese women. They wear a long petticoat made in two widths of cotton or silk, and almost always in a coloured pattern of horizontal stripes, the lower width having a check introduced. This is fastened round the waist by a hitch. Over their shoulders they throw a cotton scarf, made of grey shirting, plain or dyed, a very faint pink. Of this the ends either hang loose in front, or are crossed over the breast, drawn under the arms, and tied behind. The hair they wear long, but always tie it in a knot at at the back of the head, like the Burmese women. Both men and women are passionately fond of flowers, which the women stick in their hair, or in the large holes bored in the lobe of the ear for the ear cylinder—one can't call it an earring—where sometimes, as in Burma, one sees a cigarette. A more graceful figure than a tall, shapely Laos girl, often with fair skin and rosy cheeks, it would be difficult to see. Unhappily to our eyes the effect is spoiled by the invariably black teeth—they are purposely stained with burnt cocoa nut—nor can our taste admire the powdering of the face, the staining of the finger tips brown, and of the nails green—worn long by both sexes where possible—which are practised by the Laos belle. The ladies of the upper class, on great occasions, wear a jacket of silk or velvet, and load themselves with jewels. It is curious to see how European fashions are penetrating. When I went to dine at Chiengmai, with the prince, he wore the old panoung, without shoes or stockings, but had on a European white shirt and collar, without necktie, and a black swallow-tail dress coat and waistcoat.

The Eastern Laos, subject to Siam, dress like the others, except that they don't tatoo themselves, hence they are called White-bellied Laos.

The Shans, subject to Burma, differ almost entirely in their dress, except that the men, like the Western Laos, tatoo. But they carry this practice much further, for they, in many cases, tatoo almost the whole body. It is also very common for them to insert under the skin small pieces of gold and silver, and small rubies or sapphires as charms against wounds. The little lumps raised over the body by this practice gives the men a most curious appearance, interspersed as they are among the tatooed figures, mostly in red, of mythological beings and animals.

The men always wear wide baggy trousers reaching nearly to the feet, generally of black glazed calico, with, when they have any upper garment, a jacket of the same. Sometimes these garments are of grey shirting, which, as the Shan rarely if ever, washes his clothes, speedily become very grey indeed. I should say that when he is fasting or in mourning the Shan always wears white. His hair the Burmese Shan wears long like the Burmese, only that his top knot is generally a little to one side, giving him a peculiarly jaunty look, and like the Burmese he winds round it a scarf, generally of bright coloured silk, the produce of the looms of Macclesfield.

The women, on the other hand, dress very much like the Western Laos except that to the petticoat or loongi they attach a third width of plain black or Turkey red, this third piece coming up across the breast under the arms, and above this they wear a jacket of white jacconet or shirting.

On their heads both men and women wear, when outside, a very broad limp straw hat, whose sides flap up and down as they walk. From their shoulder invariably depends a coloured cotton bag containing betel box and pipe, for both men and women smoke pipes, and across their other shoulder, generally at an angle, is a short stout bamboo, at each end of which is a basket containing their food, their spare clothes, and their little stock of peddlar's wares. They always walk in single file, and a long string of them on a journey with flapping hats, dangling bags and hat strings, and baggy trousers presents a very comical spectacle.

In the districts immediately adjoining the Irawadi Valley the women wear the Burmese tamien, or petticoat, opening down the front.

The Shans subject to China approximate in their dress more nearly to that of the Chinese of those regions, the most noticeable point being that both men and women eschew bright colours, and keep to dark blue or black.

Both Siamese and Laos burn their dead, but while the former keep the ashes in their houses, the latter bury them in a cemetery, with a monument when they can afford it. The cremation of the princes and revered monks are the occasion of imposing ceremonials, which generally do not take place until many months after death, the body being meanwhile embalmed.

As in Burma, the women have a much better position than in most Oriental countries. In marriage they are allowed to gratify their preference, and on a divorce—which is easily obtained—they get back their share of the common property. The poorer men have but one wife, but the rich have many, though polygamy is discouraged by their religion. Most of the bazaar dealing and general small trafficking of the country is in the hands of the women, just as it is in Burma, and in the higher class an able women often has great influence.

Slavery is universal in all these states, arising either from debt, or capture in war. The present king of Siam some years ago passed an ordinance by which a gradual emancipation is being effected, and in a few years slavery will have disappeared. At no time, however, were slaves harshly treated, and in some ways their position is easier than that of the poorer freemen.

Both Siamese and Laos are unhappily addicted to the vices of opium smoking, drinking, and gambling. The two former vices are severely denounced by their religion, and in Upper Burma, the king, while he permits the utmost liberty to the Chinese, punishes severely any infraction by a Burman of these precepts. As our experience in British Burma has shown, all these Indo-Chinese races are particularly liable to the seductions of opium and liquor, and in the Siamese States a large revenue is derived from the granting of monopolies for the supply of them, all of which are held by Chinamen. The King of Siam has established a tariff which it is to be hoped will check the consumption of cheap foreign liquor, and it is greatly to be wished that he could see his way to check not only drinking, but opium-smoking and gambling, which are steadily ruining the character of his people. They are a fertile source of debt, slavery, debauchery, and robbery.

As regards the use of opium by the Chinese themselves, you will perhaps allow me to say a word, though it is outside the limits of my subject. The truth, as usual, seems to lie between the extreme statements of the advocates on either side. Moderation in the use of opium is no more deleterious than moderation in the use of alcohol, and in malarious districts it seems to be positively beneficial.

But in excess it utterly demoralises the character and shatters the constitution, and a Chinese employer will avoid a man who smokes opium—meaning by that a man who takes it in excess, just as we mean when we say a man drinks, a man who drinks to excess.

As to our own action in the matter, while it is monstrous for us to interfere with any tariff the Chinese choose to impose, it is difficult to see why, so long as the Chinese Government permits the drug to be grown extensively in China itself, there should be anything wrong in our supplying it. There is no more reason against our supplying opium than against our supplying whisky or gin.

The Shans are very fond of music, and that of the Laos is the most melodious and pathetic of any in the East. Their songs are either odes in praise of some person—they often improvise one in the traveller's honour—or of love.

Of the drama the Shans, like the Burmese, are passionately fond, and many strolling companies go about the country playing. The princes sometimes keep slave companies of their own, and at Chiengmai I witnessed a performance of one of these.

A kind of combination of wrestling and boxing is also a favourite amusement. A great entertainment of this kind was given by one of the nobles of Chiengmai while I was there, on the occasion of the cremation of the body of one of his sons, who had died six months before. The scene was striking. Round a great courtyard ran an elevated verandah. Round this was seated the prince and nobles of Chiengmai, with their wives and attendants; under the bright, still sunlight, lofty arica or betel-nut palms, cocoanut and bamboos nodded their plumes. Below, the courtyard itself was packed round the side with spectators. . The middle was kept clear as an arena, and the competitors were brought forward in pairs, selected by a master of the ceremonies, himself an old boxer, who watched that fair play was done. Some of the boxers were magnificently developed men, in fine condition, and many of the rounds were well contested. After each round both combatants got a prize, handed down by the prince, always one of the old lumps of silver worth about five rupees, which used to do duty for money. At the end of each days wrestling—it lasted three days—we threw down small silver pieces to be scrambled for by the crowd, the prince and his little daughter being the most active in the throwing.

With regard to the total population of these regions it is very difficult to form any opinion. The estimates vary from six to thirty millions, the probability being that the truth is much nearer the smaller than the larger figure. A great proportion of the surface is unproductive mountain and forest, and the perpetual wars which until lately devasted these regions have left the population much smaller than even the fertile portion could maintain. It is said that not one twentieth part of the fertile delta is actually under cultivation.

With regard to the trade, I have already spoken of the chief natural productions of the country. To the upper country, most of the fine goods, such as silks and velvets, come over from Moulmein either *via* Raheng or Chiengmai, while the heavy goods such as salt, cottons, crockery and hardware of all kinds, perform the laborious and costly river journey. At Chiengmai I saw the tickets of many well known Manchester firms, on shirtings, grey and white, turkey reds, and yarns, grey and coloured. Chiengmai is a market of distribution where the petty traders from the East and North come to exchange their wares—from the North raw silk is the principle article—for European goods. The Yunnan traders travelling at a great speed with ponies mostly go through Chiengmai without stopping to Moulmein, occupying they told me nearly six months on the double journey.

Immense numbers of cattle are driven over from the Laos States to British Burma. I met several thousands on my journey.

There can be no doubt that with the natural increase of population, and a wise encouragement of Chinese immigration, these regions will furnish in themselves a great field for trade, and I need hardly say that nothing would help the developement of the country like a railway such as Messrs. Colquhoun and Holt-Hallett propose.

I have now to say a few words about the political organisation.

In Siam proper the king is theoretically absolute, but in practice, until lately, his hands were a good deal tied. This was owing to the custom of having the great offices of state and governorships hereditary in certain families. The holders of these appointments farmed the revenues of them, and practically made all subordinate appointments, so that really within their own limits they were more powerful than the King himself. The evils of this system were great, and the present king has had considerable success in checking them.

He has pursued the same policy of strengthening his own central authority in the case of the various subject states. Some of the old Laos principalities are now administered by governors appointed by the king direct.

In the case of the semi-independent states in the North Meh Nam Valley, of which Chiengmai is far the most important, he has been helped by the accident that the Treaty with England stipulated for the appointment of a Siamese official in those States, who should take cognizance of disputes between British subjects and the Laos. Prince Pechit, the king's brother, who is head of the Siamese judicial department—and is a most capable and well-informed man—has lately made a long stay in those States, and has introduced a great many improvements in the administration, alleviating the evils of the monopolies and other oppressions.

All these small Shan States—as well those subject to Siam as those to the North subject to Burma and China—seem to have much the same constitution.

There is an oligarchy of nobles arranged in a regular gradation, of whom the first or chief prince is theoretically supreme, but with a power practically, unless he is a very strong man, much limited by the others. Estates or provinces go with the various offices in this oligarchy, and the succession to the offices and estates is limited to certain families, but it by no means always goes to the eldest son, or even the eldest male member of the family. Although the female does not succeed the succession may be carried by her. The present Prince of Chiengmai, for instance, owes his succession to his having married the eldest daughter of the late prince, and though he has a son by a previous marriage, who holds the fourth place of rank in the State, the succession will probably descend not to that son, but through his—the prince's daughter by his present wife, who, as I have said, is daughter of the former king. The selection of a successor to any of the places of the oligarchy seems to be made by the other members of it, but it requires confirmation by the King of Siam or Burma as the case may be. There being no regular order of succession in these offices any more than there is in the Kingdoms—that of Burma for instance—the claims of different members of the same family often give rise to protracted disputes. In the case of the states subject to Burma these disputes have often been the occasion of extortion at court. It is owing to a case of this kind that the King of Burma has for the present lost his authority over a large group of states to the east of Mandalay.

But I do not think it is quite safe to assume, as Mr. Colquhoun and Mr. Hallett do when they mark all these states on their map as independent, that the King of Burma will not regain that authority. Oriental authorities work slowly, and ofter manifest unexpected vigour. When Bhamo was taken last autumn, it was assumed that it had passed from the King of Burma for ever—indeed Mr. Hallett marks it as in the independent Shan Country—but after some months the Burmese retook it. In any case Mr. Colquhoun and Mr. Hallett, or their map makers, give rather too wide an extent even at present to their independent country, some of the territory included by them having never revolted from the Burmese authority. A British Company is at this moment working teak forests under leases from the King of Burma both to the east and west of the Irawadi, on ground which Mr. Hallett marks as independent.

Under the wise and firm rule of the King of Siam, the administration of justice in his dominions is steadily improving. His officers are active in the repression of crime, and except in one small district travelling is as safe as in India. That district is the region round Raheng. Through this all the trade to the upper valley passes, and large sums of money are conveyed by that route to the Teak forests. The temptation therefore is great, while the robber's chance of escape is also great. The country is hilly and forest covered, and is close to the British frontier, over which the gang with its booty easily escapes in a few hours. The Siamese blame the British authorities, I think with some reason, for not being sufficiently active in their co-operation—indeed the British side is quite as unsafe as the Siamese—but, notwithstanding all these difficulties, the Siamese governor has succeeded in extirpating some of the worst gangs, most of which I may say are recruited in British territory. In these dacoities the attacked party has little chance of escape. The gang takes up a position in some wooded knoll where the swiftly running current brings the travellers' boat close to their ambush. Themselves unseen, they pick off the helmsman and some of the rowers. The others jump into the water for their lives, and the boat drifting helplessly down becomes an easy prey.

Though I had a good battery which I kept at full cock beside me through the dangerous places, I felt that one would have no chance, so I was not sorry that I missed a brush with the robbers.

Looking to what that most able and enlightened man, the young King of Siam—he is only thirty-four—has already accomplished, one feels great hopes of the development, prosperity, and happiness of his dominions, if he is let alone.

But on this point it is impossible to feel easy. From our own side there is of course no danger, but we have in every region, to our cost, experience of the restless activity of the

French. For years they have had their eyes on the valley of the Meh Kong. In 1863 they obtained the protectorate over Cambodia—till then a possion of the Siamese—by a trick, and this protectorate they converted a few months ago into an annexation, which, from the revolt that has since taken place, the people don't seem to like. They are continually intriguing to extend their frontier at the cost of Siam, and now that they have been foiled by the Chinese we may expect to see their efforts on the other side redoubled. They have lately been negotiating with the King of Burma, it is said, for the cession of the Shan States on the Upper Meh Kong, to the North, that is, of the states subject to Siam, and, though this has been denied, there is some probability of the story being true. The French have a strong lever to move the King of Burma, in the possession at Pondicherry of the Myingoon Prince, his eldest living brother, and the most dangerous, as being the boldest, of the possible pretenders to the Burmese throne.

It is a pity that the English Government has done so little to strengthen its own influence in Siam. Even as regards so easy and yet so important a matter as the construction of a short length of telegraph line to connect Burma, and through it India and Europe with Siam, we have been dilatory in the extreme. The Siamese, anxious that the English line should be in Bangkok first, pressed on the construction of their side, but the English were slow. Meanwhile the French threatened the King that if he did not complete his part of the line towards Saigon they would send in their own engineers to do it. The result was that the immensely longer connection with the sea cables, *via* Saigon, was completed first, and French officials got control of the telegraph office at Bangkok.

When, sometime afterwards, the English completed the short connection on the Burma side, it was constantly interrupted.

Then there is too much reason to think that the British Consulate in Siam has until lately shown far too much bias in its action as regards the innumerable disputes between Burmese foresters, its own subjects, and the Laos princes. These foresters, hardly one of them with either means or character—and I speak with knowledge on these points—vamped up all kinds of claims against the princes who owned the forests, and dragged them into the Consular Court.

In Consuls like Mr. Knox and Mr. Palgrave they found ready listeners to the most ridiculous claims and evidence, and the simple Laos princes were almost invariably cast in immense damages. Anxious though the Siamese were to protect their subject states, they were naturally afraid of incurring by resistance the hostility of the English, and so the injustice went on for years. The result is that the Laos princes refuse, whenever they can, to let a forest to a British subject, and they complained to me bitterly of what they had suffered without reason, which, having experience of their antagonists, one could easily believe. A British Vice-Consul has now been established at Chiengmai, and there is reason to hope that this long-standing sore may be healed.

It is curious to observe the contrast between this bullying action in Siam in favour of preposterous claims, with the absolute non-intervention policy as regards Upper Burma, where the interests at stake are so much more vital.

In other respects the policy of England as regards these regions is in curious contrast with that of France. For more than forty years no exploring expedition has been sent towards the east of Burma, and when Mr. Colquhoun proposed his expedition not only did the Government, for fear of offending the susceptibilities of France, refuse to contribute towards it, but they even refused to give Mr. Colquhoun his pay while he was engaged on it. No such consideration for English susceptibilities has been manifested by the French. They have despatched numerous expeditions through the Siamese and Shan territorities. Only last year, at Chiengmai, I found Mr. Neis, an officer of the French Marine, who had been surveying in the Laos States.

While we may be as far as possible from being jingoes or annexationists, it is not unreasonable that one should expect our Government to do its best towards keeping the markets for our trade open. I need hardly say they would be closed if they fell into the hands of the French. It would surely be preposterous to allow that government to seize the upper Meh Kong, which would make it a neighbour of Upper Burma. And considering our own policy of developing native government in India, it would on sentimental grounds be a pity to see Siam, the most promising native government in the east, fall under the numbing influence of France. The King of Siam, who knows he has nothing to fear from us, professes anxiety to bind his country to us by the introduction of English capital and enterprise, no tie would be so strong as a railway, and it will be a great misfortune if we allow our usual supineness to prevent our giving him what support we can of this kind against his unscrupulous neighbours on the east.

As is well known the Shans and Siamese are Buddhists, and belong like the Burmese to the southern and purer school of that religion. But Buddhism among the Shans is more mixed up with the superstitions of the original spirit worship which seems to have prevailed all over these regions before the introduction of Buddhism. As in other Buddhist countries, however, the piety of the rich has covered the country with magnificent temples and monasteries in which are maintained thousands of monks.

To supplement Mr. Bryce's remarks we append a few extracts from an address on December 14th, 1885, by Mr. Holt S. Hallett, C.E., F.R.G.S., at Leigh, on the "Exploration Survey for a Railway Connection Between India, Siam, and China":—

For the last thirty years or so it has been the aim of the mercantile public at home and in the East, and of the ablest of our Indian administrators, to open up and develope our trade with South-west China. Many projects have been mooted for this purpose, and, as was not unnatural, owing to the absence of geographical knowledge, these projects all aimed at reaching their objective along the valleys of the main waterways of Indo-China. Improved acquaintance, resulting from a number of explorations, has, however, demonstrated them to be impracticable. It may be interesting to you to know that the Shan States in many particulars resemble the Highlands of Scotland, and the system of government is of a similar patriarchic class to that of the ancient clans of Scotland. One curious custom which obtains amongst them may be mentioned here, which renders the serfdom of the people of the lightest description. They have the power of changing allegiance to their chief at their will, which contrasts favourably with the system obtaining in Siam, where the people are under grinding Government taskmasters, whose service they cannot escape from.

Throughout the Shan country I was received with the utmost courtesy and kindness by the princes and people. This was partly due, without doubt, to the admirable relations existing between them and the American missionaries at Zimmé, who kindly accompanied me as interpreters on several of my journeys, as well as to the great care exercised by myself to respect their customs and prejudices, but especially to my seeing that everything in the shape of supplies and service was paid for by my followers. The missionaries at Zimmé, from whom I received great kindness, are most anxious to see the railway constructed through the country, as they look to it as a great engine of civilisation and development of the whole of South-eastern Asia. It is too often the fashion with thoughtless and inexperienced people to underrate the excellent work accomplished by the missionaries, who go out into the heart of these Eastern lands and live amongst the people. The missionaries at Zimmé have not only made converts among the people, but, by harbouring the so-called wizards and witches, have shaken the common superstition regarding them. All diseases and accidents were formerly ascribed to the action of familiar spirits. Now many of the nobles and some of the people call in the aid of the Christian doctors. I was exceedingly pleased to find the goodwill manifested by all towards the missionaries. Their schools are well attended, and the attention, neatness, modesty, and decorous bearing of the pupils were marked and pleasant to observe. The people are so well disposed towards Europeans that the lady missionaries travel in the country without other protection than their Shan servants.

For the past four years Mr. Colquhoun and I have deeply interested ourselves in the subject of the expansion of our trade, by linking on China and the intervening countries to India by means of railways. From the Brahmaputra Valley into the valley of the Irawaddy the railway could be joined on, without meeting any great difficulties, to our Rangoon and Toungoo line, having its present terminus at our seaport of Rangoon.

There can be no doubt that one of the first steps that should, and doubtless will, be taken on our occupation of Upper Burmah, is the extension, long ago suggested by Mr. Colquhoun and myself, of our Toungoo line to Mandalay, whence, later on, it could be continued, either up the Kyendwen or *via* Bhamo, to the Brahmaputra Valley, to form a connection with the Indian lines. It was forced upon us that the required connection of India and China would have to be made across the hills somewhere in the latitude of Moulmein. From this point there are many routes into the Siamese-Shan States, and the hills lying between the valleys of the Irawady and the Salween ending at Beeling are thus avoided. The hill ranges are in places from 6,000 to 8,000 feet in height, and many of the passes about 4,000 feet. I was, however, enabled, after studying the country, to trace a path between Raheng and Kiang-tsen, which would in no place rise more than 1,643 feet above sea-level, or 580 feet above the neighbouring plains. The length of this section of the line would be 300 miles. From Kiang-tsen the railway will be produced through the plain that borders the Meh Kong past Kiang Hung, where the river, which is there 1,620 feet broad, will be bridged to Ssu-mao, a large garrison town, and an important *entrepot* of trade on the south-west frontier of China. At this point the Chinese system of railways would have their junction. It is now universally acknowledged by those who have studied the subject, that a railway to connect India with China would have to be carried through the Siamese-Shan States. The explorations executed by me show that there is no other route by which a railway can be carried through these States at so moderate a cost as that proposed by Mr. Colquhoun and myself. The trunk railway would pass 481 towns and villages between Bangkok and Kiang-tsen, and will be about 575 miles in length. This, together with the portion of a branch line between Raheng and our frontier, will cost about five millions sterling, and can be carried out by the Siamese Government in sections from 50 to 100 miles at a time. The cost of the branch, connecting the Siamese line at our frontier with our seaport of Moulmein, has been estimated by the Government of India at £916,616. Allowing £2,000,000 for the production of the main line from Kiang-tsen *via* Kiang Hung to the Chinese frontier town of Ssu-moa, a distance of about 250 miles, the whole system of railways proposed by us, including the main line from Bangkok to China, and the branch line to our seaport of Moulmein, would not require a greater expenditure than £8,000,000 sterling. As we are now practically in possession of the Burmese-Shan States, through which the line would run from Kiang-tsen to Ssu-mao, this portion of the railway, as well as that from Moulmein to our frontier, can be carried out by the British Indian Government, on the completion of the Siamese portion of the main line. The Siamese will undertake to construct their railways, costing £5,000,000, as soon as our Government expresses its intention to sanction our branch to the frontier, which, according to its own estimate, will cost less than £1,000,000. In my interviews with the King of Siam and his brother, Prince Devawongse, and afterwards in my addresses to the London, Manchester, and Glasgow Chambers of Commerce, I have been able to show that the construction of the system of railways which we propose would be handsomely remunerative as an undertaking, and would tend greatly to the increase of commerce in a vast region which is inhabited by a people who are born with the instinct of improving their condition by trade, and which is now traversed in every direction by caravans carrying the produce.

Besides the caravan traffic in European and Chinese goods, tobacco, pepper, paddy, salt, dried fish, vegetable wax, cutch, jaggery, tamarinds, tea, gamboge, liquorice, sarsaparilla, cocoa-nuts, dyes, and much other produce, are moved about the country, and form a local and through traffic that would greatly develope with introduction of railways and the ensuing decrease of the cost of transit, and certain increase that would occur in the cultivation and population of the country. All travellers through the Shan States are struck by the many caravans that pass in every direction. When passing the Loi Saket Pass, which lies to the north-east of Zimmé, I counted in one day 154 laden cattle and 111 porters. Between Kiang-tsen and Lagong I noted 670 laden cattle and upwards of 1,200 emigrants going in the direction of Kiang-tsen; many others had passed by other routes. Wherever we went, produce and merchandise were being conveyed by elephants, oxen, ponies, mules, and porters. Besides the caravan traffic, elephants, cattle, buffaloes, and ponies are brought into British Burmah for sale from the Shan States, which form the breeding-ground and source of supply of these animals, which are absolutely necessary for the working of the forests and paddy fields that form the wealth of our most rising possession in the East—British Burmah. When we know that upwards of a hundred thousand animals have died in a single year in British Burmah from foot-and-mouth disease, we can understand the importance of having such a fine breeding-ground and cattle market neighbouring the country.

In considering the traffic which would be likely to arise from the construction of railways through the centre of Indo-China, it will be well to remember that although the population of our possessions in British Burmah is only one-fiftieth of that of our Indian dominions, yet British Burmah has one-tenth of the whole trade of India; that Upper Burmah, which, since the rebellion of the Burmese-Shan States, has scarcely a million of inhabitants, still carries on a trade with us of about £3,000,000 sterling (this is remarkable, the more so as traffic between China and the Shan States and Burmah has been stopped for some time, owing to the rebellions); that a million sterling of treasure is imported into Burmah each year more than is exported (this must have an effect upon the silver question); that Chinese emigration has been shut out lately from America, Australia, and other places, and would certainly set into the fertile plains of Indo-China if it were encouraged and facilitated by the construction of railways (Chinese settlers from Hai-Nan are already cultivating cotton to the north-east of Raheng, steamers ply regularly from Hong Kong *via* Swatow to Bangkok, and the railway would most likely be constructed by Chinese labourers brought into the country for the purpose, who would settle along the line); and also that the great want of British Burmah is population, as only one-fifteenth part of it is at present under cultivation. Taking the cultivated area as 6,000 square miles, and the population at 4,000,000, the density per square mile would be 666, or three times what it is over the whole of our Indian domiminions; but taking the whole area of British Burmah, the population is less than 45 per square mile, against the average of 220 per square mile in British India. The population of British Burmah is increasing at a rate three times as fast as that of Great Britain and Ireland, and nearly doubly as fast as that of the United States of America.

Mr. Colquhoun and I have given our services gratuitously during a series of years in promoting the connection of India and China in the interests of our national commerce. We have performed our part of the work as pioneers by exploring and reporting upon the country requiring examination; we have shown that railway connection between India and China is practicable, at an outlay not excessive; that the country is well worth opening out; and that the connection of Siam and China with Burmah will open to British commerce the rich but land-locked interior of Western China, as well as develop and civilise the whole of Indo-China through which it passes. It now remains for the mercantile community to do its part, and we earnestly trust that the present opportunity for permanently increasing our commerce and strengthening our position in Asia may not be allowed to pass away.

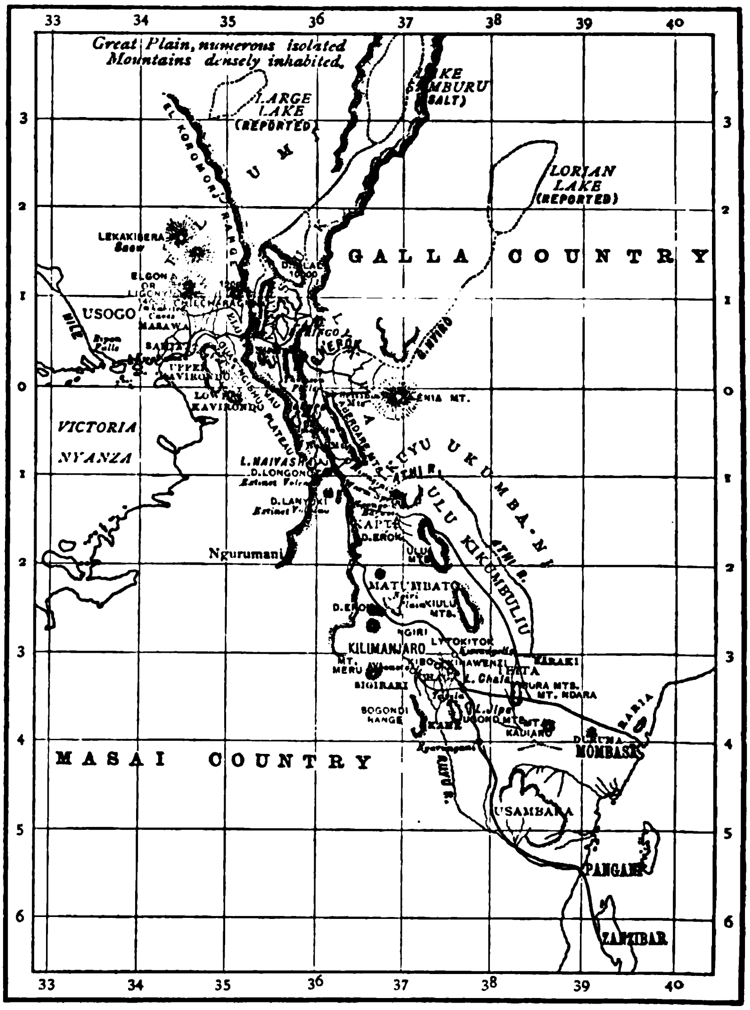
BRITISH INTERESTS IN EASTERN EQUATORIAL AFRICA.

BY MR. H. H. JOHNSTON, F.Z.S., F.R.G.S.

[Delivered before the Members of the Society, at the Manchester Athenæum, on Friday, June 12th, 1885.]

IT is, I suppose, a peculiarity of most travellers in little known countries that they are always inclined to be enthusiastic about the region it has been their peculiar privilege to visit. Very possibly this feeling has its origin in that deep laid egotism which underlies so many of our opinions and prejudices. Because *we* happen to identify ourselves with a particular part of the world, that region derives, we think, added interest from our exploits, and at the same time, its natural advantages, peculiar scenery, or remarkable features reflect notoriety on us. We are apt to identify ourselves with the land of our travels, and to jealously uphold the superior merits and exceptionally interesting character of our own particular region. This must strike anyone who attends an assembly of celebrated travellers. Each distinguished individual is vaunting the wonders and beauties of the country associated with his name. Have we not all met men who considered some collection of mud-built huts in Central Asia, the queen of the world, and the key of the East, but who listened quite coldly when some other famous traveller descanted on the features of some Central African or American river which he alone had ascended, and along the banks of which an earthly paradise existed? How familiar we all are with such well-known phrases as "The granary of the world," "The pasture lands of the future," "The sanatorium of Africa," "The garden of Asia!" Those of the Manchester Geographical Society who are kind enough to listen to my discourse to-night will at best accord me a tolerant hearing, and will smile indulgently at any enthusiasm I may display. Possibly a few weeks ago some other and more distinguished traveller lectured to the same audience on the glorious scenery and magnificent commercial prospects of Kamschatka; or involuntary applause may have been wrung from you by a fascinating description of the natural advantages of the Falkland Islands; and to-night you will look on the notice board and see that I am down for Eastern Equatorial Africa, and will wonder indulgently whether I can possibly find anything to say on the subject which has not already been said. Supposing even I touch you with my earnestness, the impression will be effaced soon after by another traveller, who will dazzle your imaginations with his account of North Borneo or the Western Pacific.

But anything like constancy of attention would be too much to hope for in these days of incessant mental activity, so that I will resign myself to the necessity of being soon heard and soon forgotten, and endeavour to describe as briefly and succinctly as possible the principal commercial advantages to be derived from opening up the countries of Eastern Equatorial Africa, and the best way in which this work might be accomplished.



Sketch Map of Eastern Equatorial Africa, from Zanzibar to Lake Victoria Nyanza, made from sketches by Mr. H. H. Johnston, F.Z.S., F.R.G.S., and Mr. Joseph Thomson, F.R.G.S., by permission of the Royal Geographical Society.

For present purposes the region under discussion may be delimited as follows: By the River Ruvu or Pangani on the south, then westwards, following the fourth degree of south latitude, to the thirty-second degree of east longitude, including the basin of the Victoria Nyanza Lake, and round again to the east from the northern border of the lake, by Baringo to Kenia, the Pokomo river, and the coast.

The most marked characteristics of this portion of Africa (which in area may be computed at about 240,000 square miles), are its immense isolated mountain masses, in most cases volcanic, such as Kenia and Kilima-njaro, the latter the highest known peak in Africa, its spacious level plains—or, more strictly speaking, plateaux—and its freedom from marshy or swampy ground, as contrasted with other parts of Africa. The water supply is fairly abundant and equally distributed, though there is but one river, the Tana or Pokomo, which is at all navigable. Besides the large Victoria Nyanza, there are a few very much smaller lakes, one or two of which are salt, and the majority fresh. The highlands up to 10,000 feet, and also the banks of rivers and streams, are generally clothed with forests of splendid timber, the plateaux are often covered with scattered bush and short grass—not the terrible giant grass of six to eight feet high, which obstructs so much of African country; while many districts I can only compare to beautiful natural lawns, whereon you meet with springy turf closely cropped by the browsing antelopes, and here and there a group of handsome shady trees, disposed with so much regularity, that it would seem as if man and not nature had planted them. Such is the country that lies between Pare and Usambara, or in the vicinity of Lake Jipe, or again, to the south of Kilima-njaro, and also in many districts to the north, as we hear from Thomson.

These vast regions are very unequally populated. On the coast there is a fringe of slightly civilised races, nominally under the dominion of the Saiyid (or "Sultân," as we incorrectly call him)—he is only known by his subjects as "Saiyid" or "Lord" of Zanzibar. These people belong principally to the Bantu family of Negroes, which includes all the inhabitants of Africa from the Victoria Nyanza to the Cape and Fernando Po to Mombasa, with very few exceptions. There are also Gallas on the north, between the Sabaki and the Dana rivers; a few invading Somalis in the same district; Arabs of pure blood and Arab hybrids of every degree throughout the length of the littoral; and about four thousand Banians and other natives of British India, who come there to trade and sometimes to settle. To add to this medley of races, there are remains here and there of ancient "Persian" and Portuguese colonisation; but, as I have before said, the bulk of the coast population is Bantu-Negro—a stock which seems to absorb or assimilate easily most foreign strains. The *lingua franca* spoken is the celebrated Swahili language, one of the Bantu tongues, which promises to be the French of Eastern Africa.

On penetrating inland from the coast the country is, for the first hundred miles, as a rule, very thinly inhabited, except on certain mountainous districts or along the course of the Ruvu, the Sabaki, or the Dana rivers, and what people there are belong to the Bantu stock, and speak languages related to Swahili. Whenever you meet with people speaking Bantu languages in this part of Africa, you find they are invariably settled agriculturists, and never nomads. As a contrast to them may now be mentioned the celebrated Masai, a negroid race of splendid physical development, speaking a most interesting language, which is distinctly related, I fancy, to the Galla tongues. The Masai are semi-nomads—that is to say, each tribe has its home country wherein the married men and women settle and move about within a circumscribed radius, while the warriors, who are forced to remain unmarried, range over immense areas for the sake of plunder. These people were once, and are still in a lesser way, the scourge of Eastern Equatorial Africa. They have made previously well-populated prosperous districts, abandoned wildernesses, driving away all the cattle, killing such of the inhabitants as resisted, and leaving the remainder to die of starvation. But of late years they no longer play the same havoc. Between the coast and Kilima-njaro they are rarely to be met with, and in such cases—as when they are encountered away from their homes—the white traveller will not find them very hard to deal with. Commerce is slowly but surely humanising the Masai. Most of them prefer trading to fighting now. Yearly they are visited by many native caravans from the coast, who go to buy ivory with iron wire, cloth, and beads. Certain tribes of the Masai, generally known as Wa-Kwavi by the coast people, have abandoned entirely this roving robber life, and now occupy large districts as quiet thrifty agriculturists. The Masai are all of them great cattle-keepers, and possess not only innumerable herds of splendid kine, but also keep numbers of donkeys as beasts of burden. These asses are very fine animals, resembling exactly the Ethiopian wild ass, from which stock they are certainly derived. The Masai are a people who, in time, will, I am sure, become amenable to civilisation, and commerce will temper their wild ways. They are inspired by no religious fanaticism, such as eliminates the fear of death in the maddened zealots of the Soudan; on the contrary, they have a very wholesome dread of guns, and are quite powerless for harm on the further side of a simple stockade of thorn bushes. If well and fairly treated in trade by Europeans they will not be prone to break the peace, and we should probably soon be welcomed in their midst.

It may be roughly said, then, that between the coast of the Victoria Nyanza the plains or plateaux are inhabited by the Masai and their helot races, and the mountains and mountain-ranges by Bantu people. These latter evidently occupied the land prior to the incursion of the Masai from the north, and existed in former times in greater numbers than at the present day. Of late, however, their fortunes have begun to revive. Forced, during their struggle for existence, to take to the highlands that were difficult of access to an invader, they have become a more hardy, independent race than their relations on the coast, and have also, in their wish to turn their mountain soil to the best advantage, become skilful and laborious agriculturists. Now their relations with the Masai are becoming sensibly improved. The Masai raids have ceased before the rude fortifications of the hill tribes, and both parties are able to trade on equal terms. The inhabitants of the mountains bring their honey and vegetables, their smiths' work and dressed skins, and exchange them against the ivory, rhinoceros horns, and native salt, that are collected by the rovers of the plains. These two distinct races, whose contact was formerly so provocative of bloodshed and rapine, are now not only exchanging peaceably their products, but also their ideas, manners, and customs. The Bantu of Kilima-njaro and Taveita loves to copy the Masai costume and mode of fighting; he incorporates many Masai words and salutations into his own tongue; while the once nomadic and restless Masai are increasingly taking to agriculture in the vicinity of Bantu settlements, and are changing from lawless robbers into quiet and honest tillers of the soil. Around the Victoria Nyanza Lake the population is very dense, and may be roughly computed at ten millions—and this, probably, is a timid estimate, for the kingdom of Uganda alone, occupying but a small portion of the North-West littoral, possesses three millions of inhabitants.

It must be remembered that the Victoria Nyanza Lake is navigated by English vessels at the present moment, and is also connected with the Indian Ocean by an overland monthly mail. With the exception of a few French priests, whose residence has been intermittent, the only Europeans at present on the Lake are Englishmen. Let us not forget that an Englishman, Captain Speke, discovered the Victoria Nyanza; that another traveller of British birth, Mr. Stanley, circumnavigated it; and let us also remember that it is the Source of the Nile and the richest trade-centre in Equatorial Africa, with a population of born traders whose appreciation of Manchester stuffs and Birmingham beads should ensure them the sympathies of British merchants.

The animal and vegetable products of this vast region are typically African. I might mention, to begin with, that it is a sportsman's Paradise. Such quantities of big game were surely never met with elsewhere. If you want confirmation of my statements on this point, read Mr. Thomson's book, "Masai Land." In some districts you may stand on a hillock, and see the plains at your feet covered with compact herds of antelopes, moving in squadrons, with straggling companies of giraffes, and scattered flocks of ostriches. Buffaloes abound so as to be dangerous. Rhinoceroses are so numerous that their horns are an important item in the trade, for they may be bought in the interior for a few pennyworths of cloth, and sold on the coast for three and four rupees each. Hippopotami are abundant in the rivers and lakes. The Vice-Consul at Lamu, on the coast, near the Pokomo river, informs me that when properly prepared (which is done by cutting the skin into long thin strips and drying it in the sun) hippopotamus hides will fetch £5 a piece in Natal. But the great wealth of this country lies in its ivory, which is preferred to any other in the Zanzibar market. The elephant abounds in the neighbourhood of Kilima-njaro to the extent of many thousands. He here becomes quite a mountaineer, and ranges through the magnificent forests that clothe the upper slopes of this giant among African peaks. The natives waylay his forest tracks with artfully-devised pitfalls and traps; preferring this more cowardly way of procuring their ivory to facing the elephant in the chase. Other tribes to the north and west of Kilima-njaro kill the elephant with poisoned arrows or javelins, or sharp swords. But in one way or another they procure ivory to supply the many native caravans, led by Muslim natives from the coast, which annually traverse this country between the Indian Ocean and the Victoria Nyanza Lake. Another item of trade should not be forgotten—namely, the valuable and handsome wild-beast skins, which may either be procured in the chase or very cheaply purchased from the natives. A leopard's skin may be bought for about two or three shillings' worth of goods, and will sell on the coast for eight or nine. Lions' skins are less easy to obtain from the natives, as that animal is rarely killed by them; but European sportsmen might shoot him to any extent, as he is both common and bold. Monkey skins of the handsome variety of white-tailed Colobus, which is alone found in this region, are valuable, and fetch a good price on the coast.

Ostriches are exceeding numerous in the vicinity of Kilima-njaro. When living at Taveita in the month of August last, I and my men used to largely subsist on their eggs, which were brought us in numbers by the natives, and sold for about a pennyworth of cloth each. Sometimes by searching we would ourselves discover nests. In the month of October, I bought twelve young ostriches from the natives at the rate of an ell of cloth a piece. I could have purchased many more, and started an ostrich farm had I wished; but as I was returning shortly to the coast, I did not feel disposed to commence the undertaking. I tried to bring these young ostriches away with me, but they all died before reaching Zanzibar, as they suffered a great deal from the effects of the land transit, being very young. Of course, to any ornithologist this country is exceedingly interesting, but to those whom I am more immediately addressing to-night, rare or beautiful birds will not serve as a sufficient inducement for opening up a new country; still, I might remark, for economic reasons, that there are abundance of guinea-fowl, francolin, pigeons, and bustards, and all these serve materially to supply the traveller with palatable food.

I cannot say much for the reptiles of this country, as there are few species which would attract the traveller's attention, and none which, as far as I know, would be useful commercially, unless the crocodiles of Lake Jipe might furnish some of the leather which is now so fashionable for dressing-bags; but the very scarcity and unobtrusiveness of the reptiles is a negative advantage. Like most parts of Africa I have ever visited, the snakes here are very few, and infrequent in their appearance. Most species, too, are non-venomous.

In many of the streams, rivers, and lakes, there are fish in great quantities, representing most of the African fresh-water genera. There are few that are not edible, and some species are remarkably good to eat, and of considerable size and weight. While at Taveita I was often able to feed the entire caravan during a week or more on the fish caught in the small river Lumi; and at Jipe they are so plentiful that a fish-smoking establishment, similar to those on the Upper Congo, might be set going to provide food for long journeys. There are few things that Swahili porters like better than a fish diet.

The insects are not likely to offer anything commercially interesting, nor indeed any of the lower invertebrate forms. I might, however, in their case, lay stress on the same favourable fact as with regard to the snakes, viz., the scarcity or absence of noxious forms. Thus there is no tsetse fly, such as but a short distance southward interferes with the introduction of horses and cattle. Mosquitoes only exist in certain districts near rivers or lakes, and are entirely absent from most parts of the country. Fleas and bed-bugs are unknown; nor has the American jigger, which is such a pest on the Congo, been introduced. White ants are not very numerous, and do not exist at all above a moderate elevation. The tænia intestinal worm, so often heard of in other parts of Africa, is never, to my knowledge, met with here. I might mention that a small edible fresh-water crab is found in the rivers.

As to the vegetable productions, they are, apart from those cultivated and introduced by man, certainly valuable. There is particularly fine timber growing in many parts, especially on Kilima-njaro and in the mountainous districts to the northward, and again on the west of the Victoria Nyanza. The forests in Usambara and in Pare, both districts near the coast, are full of magnificent lofty trees, which are much prized at Zanzibar for shipbuilding. On the coast of Zanzibar timber sells for 25 to 50 dollars per 50 cubic feet, according to quality.

Gums are produced in the interior—both copal and a kind called false copal. India-rubber can be produced from at least one creeper, the *Landolphia Florida*, and I think also another, a species of fig. Coffee grows wild, especially in the northern parts of the district, where it is the same species as the Abyssinian plant, which, it is supposed, being first introduced from the kingdom of Kaffa, to the south of Abyssinia, thence derives its name. Coffee-planting would succeed admirably in districts like Usambara, which may be regarded as the natural home of this shrub, which is indeed indigenous to the African continent.

On the trees occuring in the Kilima-njaro and Usambara forests orchilla-weed is found growing in incredible quantities. When delivered half clean—that is to say, mixed with sticks and rubbish—on the coast, it fetches from three to three and half dollars per frasilah of 35lbs.

As regards minerals, iron ore is found in some abundance, and copper apparently also, since the natives possess rude rings and ornaments of this metal, which have not come from the coast. Nitrate of soda covers vast plains to the south, west, and north of Kilima-njaro. There is good building stone in many parts of the country. Limestone often appears.

And now, having briefly noted some of the productions with which this part of Africa is naturally endowed, I may mention others which owe their introduction or development to the agency of man.

Vast herds of cattle are kept, not only by the Masai, whose very *raison d'être*, as it were, consists in cattle-breeding, but also by the agricultural races on the borders of Lake Victoria Nyanza, and in the mountain districts everywhere. When I was residing on Kilima-njaro, I not only purchased excellent beef at about 10s. a bullock, but also procured daily so much milk that I was able to make cream, butter, and cheese in plenty. The oxen are not, as a rule, so large as the Cape breeds, and, indeed, come from quite another stock, being descendants of an Asiatic humped variety—the zebu—introduced into Africa by the ancient Egyptians. The hides are held in such little account by the natives that they may be purchased for the merest trifle. As I have already mentioned, the Masai keep large herds of fine strong asses, which they are always ready to sell cheaply.

Goats and sheep are most abundant. The goats are small, plump, and great milk-givers. The sheep belong to the fat-tailed variety, and offer really excellent, juicy, tender mutton. Those who have visited Usambara will agree with me that the mountain mutton of East Africa rivals in tenderness and shortness that furnished by the Welsh or Highland sheep. Like all African sheep, they are hairy and without wool.

Fowls are not kept by the Masai, but are met with in great quantities on the Victoria Nyanza, and among all of the agricultural Bantu races. On Kilima-njaro they might be purchased at the rate of one ell of cloth each, averaging a cost, when the local value of cloth is estimated, of 2½d. each. In two days, at Mandara's capital, I purchased eighty fowls. Some of them are a very handsome breed—pure white, with very long tail feathers in the male. Another variety is plump and dumpy, with exceedingly short legs. The hens are very good layers.

There is a great quantity of delicious honey produced throughout this district. The wax is of very good quality, but the natives have no use for it and merely throw it away.

The vegetable productions of native cultivation are the banana, the sweet potato, the edible arrow-root, the sugar-cane, Indian corn, intama, or red millet, and many unnamed varieties of peas and beans. A little rice is grown in some districts, namely, at Taveita and on the river Dana. Tobacco is everywhere abundant and exceedingly cheap. I might mention my own almost incredible experience with the cultivation of European vegetables on Kilima-njaro. Immediately after my arrival I planted the eyes of a few potatoes, onion bulbs, and the seeds of mustard, cress, radishes, turnips, carrots, peas, beans, spinach, borage, sage, tomatoes, cucumbers and melons. Everything came up, and flourished amazingly. In three months' time I had a dozen fine cucumbers from one plant, and so many potatoes that I was able to give them away to my men, as well as supply my own table. I had everything else in abundance in a short space of time. Before leaving, I had planted my land at Taveita with wheat and coffee, limes, oranges, mangoes, and cocoa-nuts. I also distributed numbers of useful seeds among the natives.

I might now, perhaps, briefly summarise the principal trade products, and in some cases give their cost in the interior and on the coast.

At present, no doubt, the most paying thing is ivory. This may be bought in the Masai countries between the Victoria Nyanza and the coast, at the rate of from 1s. to 2s. a pound, according to quality. When I refer to money in the interior, I mean money's worth in cloth, or other trade goods. On the coast, ivory sells at from 6s. to 10s. a pound, sometimes reaching a higher price.

Hides may be got for almost nothing in the interior, and merely cost the expense of transit. On the coast they are sold, when dry, at about 1 dollar for 7lbs. Rhinoceros horns I have already alluded to. They find a ready sale on coast, fetching on an average 5s. apiece.

Live stock of all kinds may be purchased cheaply in the interior, and find a ready market on the coast.

There is even another source of profit, in which, although many people laugh when I suggest it, *I* see nothing ridiculous, viz., the capture and sale of wild animals. If it can pay Hamburg and Austrian firms to hunt and employ hunters on the confines of Abyssinia, for the purpose of supplying the zoological gardens of the world with wild animals, why should not the same thing be done here, where animal life is present to a degree which puts Abyssinia and the Eastern Sûdan to shame? If you can get from £100 to £200 for a young rhinoceros, elephant, hippopotamus, or giraffe, with lesser sums in proportion for large antelopes, zebras, buffaloes, ostriches, lions, leopards, snakes, and crocodiles, surely it is worth while to capture them in districts like these, that are actually nearer the sea than the hunting-grounds of the German firms, and where the natives are already familiar with such a trade, and with the mode of capturing wild animals alive. When I was in Kilima-njaro and Taveita, the natives were always bringing me live creatures for sale, and I have already mentioned how cheaply I bought young ostriches.

Another important trade product would be orchilla-weed, which may be gathered for nothing from the vast forests of Kilima-njaro. I have already mentioned its selling price on the coast.

Iron, copper, and nitrate of soda might pay a profit on their transport, when communications between the coast and the interior are facilitated. Nevertheless, it is to be admitted that the special wealth of this country lies in its agricultural future. There are districts that might become the granaries of the world, possessing over large areas a European climate. There are other regions peculiarly adapted by their elevation for the culture of quinine. Sugar-cane already grows half wild, and its cultivation might be increased to any extent. Coffee, tea, cocoa, vanilla would thrive in countries and districts remarkably suitable for their favourable growth. Above all, the question arises—If it can pay people to open up and trade with other parts of Africa, why should these magnificent fertile lands remain untouched, when they possess a climate superior in its salubrity to any other part of the continent? In the neighbourhood, and near the east of Kilima-njaro, the greatest heat registered was 81°; in the warmest part of the interior, 91°. The average night temperature in hilly districts is 60°; in the plains 68°. Except on the loftiest mountains, and on the Victoria

Nyanza Lake, where it rains a few days in every month, the seasons in Eastern Equatorial Africa are regular in their divisions of wet and dry. From June to the end of October there is almost no rain, and from November to May there is an abundant rainfall during certain months. On Kilima-njaro the climate up to 8,000 feet is that of a Devonshire summer. Above that elevation you may have it as cold as you like, the higher you go.

I hope I have now said sufficient to show you that if Africa is worth opening up at all, the region which lies between the coast and the Victoria Nyanza is eminently so. There is no doubt that Africa is the New World of the nineteenth century. What America was to Europe in the sixteenth and seventeenth centuries, that Africa is now. Within the last two years England, France, Germany, Portugal, Spain, and Italy have taken decided steps towards founding African colonies and even empires. Consequently, I argue from this that if land in Africa is worth having, how much more profitable would it be in a fine country with a healthy climate lying between a great lake and the Indian Ocean!

Moreover, there is this reflection to be made. If the other civilised nations of the world practised the same principles of Free-trade as ourselves, it would little matter to our merchants which of the European powers exercised dominion over Eastern Equatorial Africa; but now, unfortunately, a system of protective duties is at present in vogue everywhere outside the British Empire, and the Congo Free State, and as the provisions of the Berlin Congress do *not* extend to the Victoria Nyanza, or the Zanzibar coast, it is highly important to the future of our East African trade that in the district I am describing to-night British commerce should be placed in such a position as to neither fear nor provoke envious restrictions.

Having explained to you that from my point of view this region is worth possessing, I will now briefly indicate the best way of opening it up to trade and civilisation. Selecting some good port on the coast, and there are three or four to choose from, within a limit of a hundred miles of coast-line, the expedition should establish itself firstly in the healthy and beautiful country of Usambara. The road to the interior runs either to the north or south of this little Switzerland, and joins to the west of it. In Usambara the first stations should be established, as the country is very healthy. Here, too, the land might be sown or planted with all kinds of crops, for the proximity to the sea would render exportation easy and cheap. From Usambara you should cross the rich and fertile valley of the Mkomazi river, and enter the hill country of Pare, the trade route continuing along the level plain at the foot of the hills. The scenery of Pare I can only call enchanting. There are wooded crags, waterfalls, secluded Alpine valleys, and splendid views. The people are pleasant to deal with, and food is plentiful. From Pare you might proceed to Ugwéno, over against Lake Jipe, the road still following the plains, and the stations being established in the hills. From Ugwéno it is a short distance to Kilima-njaro, which offers splendid sites for large settlements, and has also no scarcity of food. From Kilima-njaro there are two routes to be opened up. One, and the most important, leads past Mount Mêru, another pleasant site for a trading station, straight to Speke Gulf, or the Victoria Nyanza. The other is more or less Thomson's track, leading to Lake Baringo and the north-west. This is the richest country for ivory. Hither every year come the Swahili caravans, who trade nearly to the borders of Abyssinia and the Nile. In all important districts stations might be founded, after Stanley's style along the Congo, and these would in time become centres of civilisation, cultivation, and trade.

There is no doubt that a railway, under British auspices, made to connect the Victoria Nyanza with the coast, would give all the trade of Eastern Central Africa into our hands; and more, it would open up the entire region of the Upper Nile, which has been closed to commerce ever since the rising of the fanatical inhabitants of the Egyptian Sûdan. People in England hoped for much at one time from the Berber-Suakim railway. It was to connect us with Khartoum and thus bring to our markets the rich products of the regions of the Upper Nile. I would not for a moment discourage any railway enterprise. The railway is the greatest civiliser that exists. It makes the desert blossom as the rose and drags in civilisation *somehow*. But I would remark that if only one railway is to be made in Eastern Africa, far better let it be from the Indian Ocean to the Victoria Nyanza. See what advantages this latter scheme possesses over the Suakim project. No one denies that the 274 miles between Suakim and Berber is much of it a ghastly desert, afflicted by one of the hottest climates in the world. Moreover, when Berber is reached, there follows a bit of dangerous and difficult navigation up the Nile to Khartoum. But, having reached Khartoum, are you arrived in your trade centre? Not at all. You must voyage up the Nile some thousands of miles at least before the region of ivory, rubber, gums, wax, hides, and other exportable produce is reached. For some distance above Khartoum desert influence still prevails, and little is produced where irrigation is not practised. Moreover, the ravages of the ivory hunters and the slave traders have driven both elephants and natives farther and farther south. The intense fanaticism which prevails among the Mohammedan tribes, reaching so far as the confluence of the White Nile and the Bahr-el-Ghazal, will also be a serious obstacle for several generations in any attempts to open up the Egyptian Sûdan from the north. On the other hand, any direct route from the Indian Ocean to the Victoria Nyanza, passing through Kilima-njaro, opens up at once rich tracts of land that, so far from being deserts, may be called, without exaggeration, earthly paradises endowed with a temperate climate. There is no heat in all this country, though it is close to the equator, which exceeds the genial warmth of an English summer. Why, I used to walk twenty miles a day, and that in the middle of the day. Who could do such a thing at Suakim, or in any part of India? Read what has been already written by Dr. Fischer, by the Rev. Charles New, by Von der Decken, by Archdeacon Farler, and by Thomson, and see whether or no my statements as to climate are confirmed. Then, too, you must remember that fifty miles from the coast we reach a country where elephants are abundant, and most tropical produce is to be found; and after a journey of two hundred miles, only three-fourths of the distance between Suakim and Berber, you arrive at countries where ivory is to be purchased at a shilling a pound. I firmly believe, also, that if Kilima-njaro were brought within a journey of four hours from the coast all the Europeans of Zanzibar and the wealthy Indian traders would establish their country houses in this salubrious locality, and that a railway would immediately increase the value of land.

Speke Gulf, on the Victoria Nyanza, is about 400 miles distant from the Indian Ocean, only a little farther than Stanley Pool from the Atlantic, or Khartoum from the Red Sea. But although this should be the objective of any English enterprise, it might be the ultimate outcome of the development of trade rather than the first motive of a trading company. The first thing is to develop commerce and create agriculture. Along many of the native tracks, as they at present exist, there is no obstacle, for stout wagons at any rate, so far into the interior as the precincts of Mêru and Kilima-njaro, that is to say, half way to the Victoria Nyanza. Mules in plenty may be purchased in Zanzibar, and will do well in the country, or asses might be bought from the Masai. Oxen, doubtless, might also be trained to draw the wagons, as on the coast. As I have before remarked, there is no tsetse-fly in the country, so that even horse-breeding might be attempted in time. Human labour is plentiful on the coast, and fairly cheap; you may hire good stout carriers at the rate of five dollars a month, and the cost of their food is about 2d. a day. Many of these men make very decent soldiers and guards, as Stanley has found on the Congo. But it must also be remembered that we are here comparatively close to the coast of India, and that of their own accord many of our fellow-subjects in Hindostan migrate to Zanzibar and the Zanzibar coast—there are some 6,000 in the city of Zanzibar alone—consequently, there would be little difficulty in obtaining coolie labour from India. A few Sikh guards would soon overawe the roving Masai, and I think it would be well to promote on a certain scale the colonisation of these districts by thrifty Asiatics from our Indian Empire, or even China.

The white men who should form the pioneers of any commercial enterprise in Central Africa must be young, vigorous, and active; not as they are so often, *usé*, battered men, who have failed in other careers, and try Africa as a last chance, They should possess sufficient education to be inspired with an intelligent interest in the wonderful nature that will surround them. There is no more miserable person in Africa than your utterly uncultured man; he pines and sickens for want of sympathy with his surroundings, while he who is so far alive to natural history as to be moved by the interesting fauna and flora of Equatorial Africa will never be lonely or have time to be ill. If any of them have a taste for sport, he will be never unhappy, for this country surely offers—without exception—the most splendid hunting-ground in the world. Nor, in such a case, will his sport be mere useless butchery of beautiful animals. He will be able to supply his caravan with fresh meat at no expense, and may secure many valuable skins or hides. In the case of elephants, a sportsman is a positive acquisition to the party, as he can procure ivory for nothing. I have personally known men in South-Western Africa who have made their fortunes over ivory and ostrich feathers.

Another plea for opening up these countries is the suppression of the slave trade. Chiefs now sell their people into slavery because the Arabs care to buy nothing else; but once convince them—and Africans are much more practical than you may think—that more money is to be gained by employing their serfs to cultivate the soil at home, and produce food stuffs, and other products for sale, and I am sure the expatriation of these wretched people will cease. Again, at the present moment, one chief makes war against another to procure prisoners and sell them as slaves; but the commercial instinct will introduce peace by turning the sword into a reaping-hook and covering the devastated fields with fair and marketable harvests. These people are well worthy of civilisation. Yes, even the fierce and roving Masai, who are already being softened whenever they impinge on the rendezvous of coast trade.

I have no doubt many here present to-night have heard some of my statements with amused incredulity, and are prepared to hotly contest them. Let me disarm their criticism by assuring them that I have merely related what has come under my personal experience, and that, however much my information may conflict with previous ideas, I hope they will give me the benefit of the doubt until some traveller following in my footsteps (as I followed in Thomson's), is able to dispute what I say. I would also like to remark that my interest in this country is purely disinterested. I am not an African trader, nor do I intend to be. Scientific pursuits have led me to this richly-endowed region, and I have thought it well to let my countrymen know what advantages it possesses; so that, when some day it comes into the hands of Germany or some other European Power, and British merchants and philanthropists are bewailing the loss of the great African sanitarium, they cannot at least plead ignorance of its existence or advantages.

I am not so foolish as to suppose that any words of mine may induce people to embark in an African enterprise likely to lead to territorial additions to this Empire—nor even that the united testimony of other and more experienced travellers will have any better result. The days of English commercial adventure and energy, which began with the reign of Elizabeth—which gave us the East and the West Indies, and a vast colonial Empire—seem to have come to an end. Colonisation or the occupation of savage lands is looked upon now-a-days with disfavour and distrust, and in many people's minds is associated with the bold, bad days of Raleigh, of Clive, of Lord Dalhousie, or Sir Stamford Raffles—of the days, in short, wherein our commercial Empire was created and extended.

THE COMMERCIAL PROSPECTS OF TROPICAL AFRICA.*

By Mr. H. H. JOHNSTON, F.Z.S., F.R.G.S.

THERE is perhaps no topic about which more diverse and conflicting opinions are held and maintained than the subject I am about to discuss—namely, "The Commercial Prospects of Tropical Africa." On one side are the pessimists, who declare that the Dark Continent is so hopelessly unhealthy that it is unfit for any inhabitants but the Negroes, and further that it has nothing to offer in the way of trade which may counterbalance its disadvantages of climate and its difficulties of transport. On the other hand are the enthusiasts, who contend that every freshly-discovered region is an El Dorado, and a mine of wealth to the *exploiteur*, and who argue that by far the greater part of Africa is a healthier residence for Europeans than India or Central America, and that the admittedly unhealthy districts are confined to certain portions of the low-lying coast. Those who take a gloomy view of the question support their adverse opinion by citing the great loss of life that unhappily attends—or seems to attend—all missionary, political, or geographical expeditions which attempt to open up to Christianity, civilised government, or scientific inquiry the obstinately-sealed regions of Interior Africa. They further lay stress on the fact that nearly all the natural or cultivated products of this great continent may be found or grown in larger quantities and at cheaper rates elsewhere, especially in regions under British rule, or with some other settled government which gives security for life and property, and facilitates the operations of peaceful commerce.

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* This paper was read before the Burnley Mechanics' Institution, and is published by permission of Mr. Johnston.

The advocates for the colonisation and the opening up of Africa endeavour to rebut these objections in several ways. They maintain, first, that the loss of life attending all pioneering expeditions in tropical countries is much the same, and that were the records of American, Asiatic, or Australian exploration placed beside those of Africa, they would have just the same sad tale to tell of gallant European explorers, missionaries, or soldiers who have fallen victims to climate, savages, or the accidents of travel. They further point out that the mortality and sickness in Tropical African settlements always tend to decrease as the conditions of life are rendered more tolerable. As to the greater question whether, healthy or not healthy, Africa can offer any real inducements to merchants or cultivators, they reply that many of its natural products are unique, or almost confined at the present day to its component territories, such as palm-oil, ivory, and copal; also that with the advantages of a settled government, security for life and property, facility of transport, and cheapness of labour would soon ensue, and the settlements in Tropical Africa would be placed on the same footing as other European possessions in the torrid zone. Moreover, they remark that in spite of the protests of the pessimists, the majority of European nations at the present day are embarking on colonial adventures in Africa in a most decided manner. England, Portugal, and France have long been extending their sway over various regions of the Dark Continent, but in addition to these old African Powers Italy, Germany, Spain, and even Sweden have been lately acquiring portions of African soil with the consent and applause of the majority of their subjects.

It is this last consideration which is perhaps the most important that the advocates of African exploitation can advance, and this, if no other, should induce us to examine as carefully as possible into the commercial prospects of Africa before pronouncing in favour of the conclusions drawn by either group of disputants. Let us therefore endeavour to form an opinion by passing in review some of the most salient and important facts in African geography, natural history, and commerce.

The configuration of this great continent is somewhat peculiar. It is very compact in shape and regular in outline, and lacks in a marked manner those accidents of coastline peninsulas, gulfs, bays, isthmuses, and islands which form such constant features in the other divisions of the earth's territorial surface. This compactness and regularity of outline are doubtless among the reasons why Africa has been so difficult of penetration and conquest.

Of the entire superficies of the Dark Continent—some eleven and a half millions of square miles—it is reckoned that about one-fourth is desert, and the remaining quantity is more or less covered with vegetation, ranging from scanty grass and low scrubby bush to the most magnificent and extravagant development of tropical forest. Perhaps the most typical character of the interior landscapes south of the Sahara desert, may be described as savannah scenery—park-like expanses of turf, dotted here and there with fine clumps of forest trees. In most parts of Tropical Africa the coast is flat and even swampy, but at a varying though never very great distance inland, the ground rises into hilly ranges and occasionally high mountains, and the direction of this elevation follows the coastline, with more or less regularity, like a terrace of successive steps facing the sea. When this is crossed—and under existing circumstances it is often a difficult task—the interior plateau or basin of Africa is reached, and here there is comparatively little variation in the general level. As the vast interior of this continent is intersected by large rivers in all directions, and studded with big lakes, it would seem as though Nature had provided us with an easy mode of transport, and had endeavoured to atone for the absence of gulfs and straits by giving us broad streams, which which would serve as canals from the ocean to the heart of the land, but this is scarcely the case. There is on every African river of any length or importance an utterly unnavigable portion, marking that part of its course where the stream cuts its way through the edge of the interior plateau and descends in abrupt cascades or whirling rapids into the plains of the littoral. Thus an effective barrier is placed between the navigation of its upper and lower courses. Were it not for the cataracts of the Nile, boats would be able to ascend the mighty stream from Rosetta to Lake Albert Nyanza, from the Mediterranean to the heart of Africa. We might go in a steamer from the Bight of Benin to the sacred city of Timbuktu, if the Niger rapids between Busa and Yauri did not interpose an effectual obstacle. For centuries the falls of the Congo and the Zambesi prevented any exploration of the courses of these huge rivers, and a hundred minor African streams might be cited which, but for their barrier of rapids, would prove useful highways for trade and civilisation. Once, however, that the barrier is crossed, thousands of miles of riverine and lacustrine navigation present themselves, and in respect of waterways the interior of Africa is singularly favoured. Not to mention the countless independent streams of short course and minor importance, there are five great river systems of the Nile, the Niger, the Sari, the Congo, and the Zambesi, offering altogether about 14,000 miles of navigation to river steamers drawing six feet of water. The area of the great African fresh-water lakes must also be taken into account, and the united sum of those already known amounts to close upon 100,000 square miles. Inasmuch as each of the great lakes is connected with one of the main river systems, it follows that in most cases they are readily accessible to navigation.

The climate of all that part of Africa which lies between the tropics has naturally a torrid character, but still the degree and nature of the heat varies much according to the region, and in some few districts an actually temperate climate may prevail over limited areas, situated in the equatorial zone. The fiercest heat exists in the Southern Sahara and especially in the Eastern Soudan. Probably here may be registered the highest temperature on the earth's surface during the summer months Nevertheless the *average* heat of the year does not appear excessive, as the extreme warmth of summer is balanced by the relatively low temperature of the winter, and the thermometer often varies 40° between the readings at three o'clock in the afternoon and three o'clock in the early morning. As one leaves the desert regions of the north and enters upon the better watered lands which lie southward of the great Sahara and the Nubian wastes, the climate becomes less extreme, the daily and yearly variations of temperature decrease, and in the equatorial zone the heat is never so severe as in the desert region on the borders of the tropics. The average temperature of Tropical Africa is certainly not higher than that of Tropical Asia or America. In the mountainous countries of Masai Land, of Abyssinia, of Nyassa, in the eastern part of the continent, and in the Cameroons and the beautiful hills of Angola, near the western coast, there are large districts—perhaps their united area would equal that of Europe—wherein the climate of the temperate zones prevails, a climate which in all essential features approaches perfection. Here the languid European, exhausted by the damp heat of the plains, may regain his vigour and brace his system with the fine air of the mountains, and kill the fever germs with the healthy cold of frosty nights. Here, even, in certain districts, he may, if he wishes it, regain the ice and snow of his northern home and carry them down in a day's journey to cool his champagne or his lemonade in the hotter districts at a lower level, where the exigences of trade or cultivation oblige him to fix his home. With such varied physical features as lofty mountains, breezy plateaux, baking plains, arid deserts, steaming marshes, and sodden forests, which go to form the superficies of the continent of Africa, the climate naturally offers different characteristics in every distinct and separate district. Here it is hot, "muggy," and exhausting; there it is hot, dry, and invigorating. In some places it is wet, chilly, and productive of rheumatism; in others the dry, scorching winds parch the skin and cause various peculiar complaints. But the most unhealthy localities are sometimes removed by a few miles only from regions of marked salubrity, and it is very incorrect to award sweeping praise or blame to the climate of any large district in Tropical Africa.

Even meteorological conditions vary considerably within a small area. Although we are able to distinguish certain general principles regulating the amount of rainfall as the season of the rains in the latitudinal sections of Africa, still local features largely influence the state of the atmosphere. Some districts will be celebrated for their superabundant supply of rain, for the violence of the storms, and for the great electrical disturbances which take place at certain periods of the year; others not far distant, and lying under the same latitude, will be remarkable for their scanty rainfall and the rarity of tempestuous weather. As a general rule, it may be said that, in Tropical Africa, *north* of the equator, the rains commence to descend in April and cease in October, the remainder of the year being the dry or rainless season, while south of the equator this arrangement is exactly reversed, for the rains fall during the other half of the year, from October to April. Nevertheless, as before remarked, this rule is constantly subject to modifications caused by local conditions. In some districts there are really two dry and two rainy seasons; in others the wet weather or the drought lasts for ten months in the year. On the Victoria Nyanza, just under the equator, there are probably only two months out of the twelve in which no rain falls, while a few hundred miles due eastward of that great lake there are districts afflicted with ten months of dry weather every year. In mountainous regions such as Kilima-njaro or the Cameroons, light showers fall continually, and the streams descending from these misty heights carry an unfailing flow of water to the thirsty plains.

So far as we yet know, the mineral wealth of Africa is scarcely equal to that of either Asia or America. Nevertheless, the balance may be greatly redressed by more thorough examination of those parts of Africa already known to us, and by the exploration of such portions of the continent as are, at present, utterly unvisited by Europeans. Still the Dark Continent, though not an Eldorado like North America or Australia, can boast of respectable deposits of valuable and useful minerals which will go far to increase its future prosperity. Gold has been found in the stream valleys of the Niger basin and of the Guinea coast for many centuries. In the unknown interior, between the northern bend of the Niger and the negro kingdoms of the Gold Coast, the country is reported to be exceedingly rich in gold, especially in the land of Diaman, at the back of Ashantee. Gold is also found in Katanga, both alone and mixed with copper. Katanga is a rich territory in South Central Africa, to the west of Lake Bangwéolo, at the headwaters of the Lualaba. The precious metal is also present north and south of the Zambezi, and was there obtained from mines at a very early date, before the arrival of the Portuguese. These old workings are all at the present time abandoned, and the very locality of the famous mines of Manika, once known to the Arab traders of Sofala, and the early Portuguese conquerors of South-eastern Africa, has been forgotten, although it must be rediscovered by the employés of the Anglo-Portuguese Company for working the Zambezi. Gold is also present in the Transvaal and in Natal. From the fact that quartz so largely enters into the geological formation of Central Africa, I should think that in the Congo basin and elsewhere we might reasonably hope to discover veins of the precious metal.

So far as I am aware silver has never been discovered in any appreciable quantity in Tropical Africa. Copper, on the other hand, is very abundant, and is distributed chiefly over the southern half of Africa. It becomes, in many districts, a regular currency among the natives in the shape of rings or bars. Iron is present in equal profusion. There is scarcely a district in Tropical Africa where it is absent from the soil, and there are few native races in this continent which are unacquainted with its working. Quicksilver is found in certain countries of Western Africa, but not to any great extent at present. Nitrate of soda is constantly met with in Masai-land and other portions of Eastern Africa. Large deposits of common salt are present in Western, Central, and Eastern Africa, and this mineral, in the shape of small cakes, becomes the recognised currency of the Upper Niger and the countries round Lake Chad. Salt is everywhere a favourite article of exchange throughout Africa. Coal is said to be found on certain East African rivers—indeed, a Frenchman in the service of the Sultan of Zanzibar has actually discovered valuable deposits in the valley of the Rovuma. Its presence is also reported in Angola on the west coast and in Natal on the south.

Many other minerals of minor importance may be obtained in Africa, but my space is not sufficient to record them in detail.

The vegetable wealth of Africa is enormous, and constitutes the chief inducement for developing the trade resources of this wonderful storehouse of tropical produce. The most valuable items under this heading are palm oil, indiarubber, gum copal, ground nuts, coffee, sugar, and cotton. The palm oil is obtained from the nuts of the handsome *Elaïs Guineensis*, a palm which is practically confined to Western Africa, although examples may occasionally be met with on the east coast, and a near relation is also found in South America. Palm oil is such a valuable article of trade that it is certain to be the great motive power in developing West Africa. Few would care to live as traders in the unhealthy, feverish oil rivers, were not the collection of palm kernels and the exporting of palm oil a sufficient cause for such an undesirable abode. Palm oil fetches at Liverpool £29, and sometimes even a higher price, per ton. The kernels after the oil has been expressed are worth £12 per ton. The supply of palms seems inexhaustible. The trees grow in incalculable numbers all along the western littoral of Africa from the Gambia to the Quanza. They penetrate the heart of Equatorial Africa in the Congo basin, up to the confines of the White Nile and the shores of Lake Victoria Nyanza. Moreover, each tree yields its supplies of oil-giving nuts year after year, and there is no sign of any decrease in the numbers of this valuable palm, Indiarubber, or caoutchouc, may be obtained from three totally different sources. One is the well-known and beautiful creeper *Landolphia Florida*, another is a species of Euphorbia, and the third is a fig tree—the *Ficus elastica* of Linnæus. Indiarubber is worth about 1s. 6d. to 2s. a pound at Liverpool. Gum-copal, a fossil sap, comes from East and West Africa. Its price varies much according to quality, but a superior kind fetches sometimes as much as £6 a hundredweight in England. There are many other gums from living trees, such as the *Trachylobum* and *Guibourtia*, which are valuable items in African trade. Ground nuts are, as I dare say you know, the curious underground seed of a kind of bean. They are full of oil, which is largely imported into France and used to make a salad oil that is nearly undistinguishable from olive oil. When delivered shelled at Liverpool they fetch about £14 the ton. Ground nuts are produced in incredible abundance throughout most parts of Tropical Africa. Coffee is really indigenous to this continent, and grows wild over nearly all the region lying between Abyssinia and Angola and Senegambia and the Zambezi. African coffee is generally sold at £1 12s. per cwt. on arrival at Liverpool. Sugar is at present almost a drug in the market, and it will probably be some time before Africa can compete with the East and West Indies. Nevertheless local manufactures might be set up to supply local wants, and in this case it is well to remember that both on the east and west coasts and in the interior the sugarcane is largely cultivated by the natives. I believe the Sultan of Zanzibar makes some considerable profit from his sugar plantations.

Cotton is cultivated in many parts of the Niger basin and North Central Africa, not to mention Egypt, a country which, not being in Tropical Africa, does not come within the scope of this paper. In many districts of Southern Angola cotton is emphatically the staple produce, and its quality is considered exceptionally good. It is also grown on the Zambezi and in Natal. African cotton generally sells at 5½d. per pound in England. The cotton seeds fetch £4 10s. a ton.

Besides the vegetable products already cited, Africa is rich in valuable and useful timber—rich to a degree that we are only beginning to realise. Some dyewoods, such as "camwood," a tree belonging to the genus *Baphia*, are worth in England £22 a ton. African ebony fetches sometimes £14 a ton in the English markets.

Copra, the dried pulp of the cocoa-nut, orchilla-lichen, castor-oil seeds, cardamons, semsem grain, rattan canes from West Africa, made from the *Calamus* palm, Calabar beans, the bark and fibre of the huge baobab tree, kola-nuts, and tobacco are also African products which pay a certain profit on exportation.

When we turn from the vegetable to the animal kingdom we again find Africa richly endowed with many productions highly valuable in commerce and useful to the world at large. Along her north-western and eastern shores are banks of fine coral, which in the Cape Verd Islands and in the Red Sea are constantly visited by divers. The coast fisheries in Africa are, in certain districts, singularly fruitful. All along the desert coast stretching from the borders of Morocco to the Senegal is this the case. Here come fishing fleets of many nations, but chiefly from Spanish and Portuguese ports, and the crews establish themselves temporarily on the shore of the Sahara Desert while they smoke and cure the proceeds of their captures. So valuable is this region as a fishing ground that recently Spain has taken it under her protection with a view to developing the interests of her subjects. Another valuable fishery lies along the south-west coast, between Mossamedes, in Southern Angola, and Walvisch Bay. The chief wealth of Mossamedes lies in the export of immense quantities of sun-dried or smoke-cured fish, which finds a ready market in the regions farther north and is a favourite article of diet among the negroes of the western littoral. The eastern coast of Africa is also abundantly favoured in its fruitful fisheries.

The chief animal product of Africa, which transcends all others in value and importance, but which, alas! promises a less secure future, is ivory—the ivory of the elephant. This huge animal once inhabited the entire continent of Africa from the shores of the Mediterranean to the Cape of Good Hope, only excepting, probably, the more arid regions of the Sahara Desert. The onslaught of the Romans drove him from Mauritania, and the ancient civilisation of Egypt doubtless expelled him from the lower valley of the Nile. Nevertheless, a hundred years ago he roamed in large herds over the sites of what are now the largest towns in Cape Colony. His retreat before the white hunters and before the ivory-hunting natives has been continuous. Every year he retires farther and farther from the vicinity of civilised settlements, and now to encounter him you must plunge into savage unknown Africa. Nevertheless so vast are the natural preserves that he has before him that his extinction is a matter of the most distant future, and let us hope that some civilised government in Africa may take decided steps towards preventing such a sad ending to a noble species by creating elephant reserves similar to those in India.

At any rate at the present time the supply of ivory continues to increase as fresh markets are opened up and new stores are tapped. The countries that, on the whole, supply the most ivory, and ivory of the finest quality, are Masai-land—viz., the country between the Victoria Nyanza and the Indian Ocean—and the Gaboon. Vast numbers of elephants are said to exist amid the Cameroons Mountains. They are also abundant in Southern Galla-land and along the Upper Congo. In the interior of Africa ivory, which at Liverpool fetches 10s. a pound, may be purchased at the rate of 1s. a pound in trade goods.

Ostrich feathers, another exclusively African article of export (for the so-called ostrich of South America is a totally different bird), are principally despatched from the Cape Colony, from Somali-land, Barbary, and Senegal. The ostrich is found from the Nubian Desert to Natal, right down the eastern side of Africa, but is absent from the west cost between 12° S. and 15° N. latitude. The feathers of the wild bird are considered superior to the plumes of those kept in captivity in the well-known ostrich farms.

Africa at the present time exports large quantities of hides from all parts of the coast, but the supply that would be tapped by opening up to easy transport such cattle-breeding countries as Damara-land, Masai-land, and the basin of the Upper Niger, would go far to pay the cost of any railway enterprise in those directions.

Other animal products of value are hippopotamus hides, wild beasts' skins, giraffe bones, hippopotamus ivory, rhinoceros horns, crocodile leather, beeswax, and living wild animals. As to the last item, it must be remembered that the many zoological gardens of the civilised world are constant and eager purchasers of the mammals, birds, and reptiles of Africa. You can generally get from £100 to £200 for a young rhinoceros, elephant, hippopotamus, or giraffe, with less sums, in proportion, for large antelopes, zebras, buffaloes, ostriches, lions, leopards, snakes, and crocodiles.

The entire population of Africa has been roughly computed at 200,000,000. Of these about 9,000,000 belong to the Semitic race (Arabs and Abyssinians), 3,000,000 to the Berber, 2,000,000 to the Nubian, 9,000,000 to the Galla-Somali, and 10,000,000 to the Fulas. Further, there are some 3,000,000 European, and about 4,000,000 of mixed races. The remaining 160,000,000 may be roughly classed as Negroes, and subdivided further into the main divisions of Masai, Negroes proper, Bantu, and Hottentot bushmen. The Semitic people are the dominant race in Northern Africa, and under the form of Abyssinians they occupy a small portion of the north-east side of the continent. The Berbers principally inhabit the central region of the Sahara Desert, but small colonies of them still linger in parts of Morocco, Algeria, Tunis, and the Tripolitaine. The Galla-Somali, or Ethiopic race, in which some include the Bishari people, between the Nile and the Red Sea, occupy the great eastern horn of Africa, besides the long strip of desert country north of Abyssinia. The Nubians are mainly confined to the valley of the Nile and certain portions of Kordofan. The Fulas are dotted over North Central Africa and penetrate to the extreme west, down the valley of the Niger. Of the four main branches of the Negro race, the Masai occupy a large tract of Eastern Equatorial Africa between Victoria Nyanza and the Indian Ocean. The Negroes proper, to the extent of some 80,000,000, inhabit nearly all Western and Central Africa between 15° and 5° N. of the equator, and also a great portion of the Nile basin between the Albert Nyanza and the Bahr al Ghazal. Finally, the gréat Bantu race occupies nearly all the huge southern half of Africa from a few degrees north of the equator down to Natal, only excepting the restricted localities of the Hottentot Bushmen people in the extreme south and south-west of the continent.

The population of Africa is by no means equally distributed. It is mainly concentrated in the great fertile river basins and along the coast. Thus the entire Sahara, which occupies a fourth of the area of Africa, has probably no more than three millions of inhabitants, while in the basin of the Congo, a region of considerable smaller extent, there are, as Mr. Stanley reckons, some forty millions. The population of the Niger basin is usually computed at twenty-four millions, that of the Nile at nearly forty millions, of the Zambezi at eleven millions, and the Chad-Shari at fifteen millions. Thus you will see that more than half the estimated population of Africa is settled in the valleys of its great rivers.

The dispositions and capabilities for civilisation and commerce which the different races of Africa exhibit are as varied as their physical characteristics and their languages. On the whole the Mohammedan populations of Northern and North-eastern Africa—the Arabs, Berbers, Somalis, and mongrel half-castes of the Soudan—are the most obstinately averse to European influence. Nevertheless, they are great traders and carriers of trade goods in the interior of Africa; and in spite of all their hatred and suspicions of the white infidel they are among his best customers in African commerce. The vast populations of Negroes in the centre of Africa are not likely to offer any opposition to the spread of trade. On the contrary, by supplying cheap labour they are likely to assist it; but in my opinion the chief hope for a civilised future in the Dark Continent lies in the Bantu race, that great family of southern negroes which includes the peaceful, thrifty, industrious inhabitants of the Congo basin, of the great lakes of the Zanzibar coast, and the sturdy Kaffirs, Zulus, and Damaras of the temperate regions of South Africa. I feel convinced that among people like these will be found the solution of the labour problem in Africa.

As yet the European Powers have done little beyond establishing themselves on the coast of Africa. They have, as it were, confined themselves to nibbling timidly at the outer edge of the continent while hesitating to make a good bite at the rich interior. Save for the enterprise promoted by the King of the Belgians, and conducted by Mr. Stanley, no European government has boldly seated itself on the El Dorado of Central Africa, and tried to rule it from within. France has penetrated some five hundred miles inland in her colony of Algeria; but that is in temperate Africa, and she halts at the verge of the desert. England also has pushed up even further from the Cape of Good Hope, but she, too, hesitates and falters on the borders of the tropics, unwilling to extend her rule to the Zambezi. Despite four centuries of occupation the Portuguese possess no more than the coastline in the colony of Mosambique, and only extend their province of Angola two or three hundred miles into the interior. On the Gold Coast, in the district of Sierra Leone, we Britons cling to the unhealthy, swampy, feverish littoral, and cannot summon up resolution to carry our peaceful rule and our legitimate trade into the rich and salubrious interior. In Egypt we stand appalled at the rash and adventurous idea of forming a British company to work the commerce of the Upper Nile, and rule the unhappy Soudan, though our ancestors, more than a century ago, ruled and conquered India with a handful of men, and founded later an Australian Empire with the sweepings of the nation. Even on the Niger, where our rule is recognised by the European powers, we hesitate to carry our merchandise to Timbuktu, though the difficulties which lie in the way are truly trifling compared with those which Mr. Stanley encountered in ascending the Congo to the Stanley Falls. Yet in the Upper Niger a famous market for our Manchester goods exists, and a market which is ready and prepared—not one to be created as in the Congo. On the Niger the natives can pay for what they buy in gold dust, in the ivory of Adamawa, in the ostrich feathers of Timbuktu, in hides, gum, palm oil, and other valuable produce. We should be justly requited for our delays in opening up to this valuable trade its natural outlet should the French forestall us, and this at one time they seemed likely to do, for they boldly pushed inland from the Senegal, and founded the station of Bamaku on the extreme Upper Niger. Had this enterprising step been followed up more vigorously there is little doubt that great harm to our future trade with the Niger would have been effected, but fortunately the usual fit of inactivity and recoil which follows on so many rash advances of civilisation seems to have overtaken our keen rivals, and we have still a chance to be first in the field.

I am always glad to hear of some fresh power of civilisation entering into the arena of African colonisation, as it generally stirs up the older occupants to renewed advances, and creates a healthy emulation in government and trade. So I welcome the advent of the Germans in the Cameroons and in the territory of Zanzibar, and I hope that by their methodical organisation of their new possessions they will confer the same benefits on science, commerce, and the general welfare of humanity which rarely fail to ensue where Britain plants her foot. I even hope much from Spanish rule on the coast of the Western Sahara and from the Portuguese administration of the districts of Angola and the Lower Congo; for although the colonial government of these latter Powers is often subjected to adverse criticism, none but the bigot or the stay-at-home geographer can deny that their rule is a hundred times superior to a native government or to no government at all. At least they make roads, construct bridges, drain swamps, build towns, suppress cruel customs, and open the country to the breath of knowledge and the feet of trade.

There is only one legitimate cause of dissatisfaction which the subjects of Great Britain can plead when they hear of certain districts in Africa and elsewhere coming into the hands of other civilised nations, and that is the differential duties levied on our commerce If only the other ruling Powers of the world adopted the grand principle of Free Trade in all their colonial possessions, it would be of relatively little importance to us in what new countries they hoisted their flags, or how far they extended their empires; for, as you are aware, whenever

England adds a fresh possession to her great dominions, the act act is fraught with equal advantages to the commerce of her rivals as to her own. Should we annex Burmah to-morrow, and remove all the present obstacles to honest trade, would the merchants of France, Germany, or Italy be treated differently to those of British nationality? Would they not rather participate equally in the benefits our fellow-subjects would enjoy? Or again, will not our protectorate of the Niger afford the same facilities for legitimate commerce to traders of every race and colour? I say advisedly "legitimate," because, of course, we do not permit the slave or liquor traffic which some might prefer to indulge in. On the other hand, can the same thing be said for the colonies of the French, Portuguese, Dutch, or even Germans? In some cases there is a differential duty of 6 per cent on foreign imports and 3 per cent on exports; or, in other cases, where Free Trade has been nominally promised, the mode of driving British commerce from the field is as follows: An increased duty on imports and exports is suddenly imposed on all merchants alike. The British traders, finding that they are working under disadvantageous conditions, pack up their goods and quit the country, retiring to some district under British rule, where competition may be keener but where the trader's profits are not swallowed up by Government dues. Strange to say, soon after they have taken their leave, the governor of the colony, or the authorities of the parent state, suddenly become convinced of the unwisdom of hampering commerce in their dominions, and remit the oppressive duties. Of this act of generosity the merchants who are the subjects of the state alone remain to profit.

Actions like these are of a petty meanness which the Briton generally regards with tolerant pity. He is aware that "foreigners" can rarely afford to compete with him in trade on equal terms. He remembers—or should remember—that many of the leading European nations are new comers in the field of commerce and colonisation and that we cannot expect them all at once to put our merchants on the same favourable footing as their own. He also reasonably hopes that in time, when they have nursed their colonies to a condition of prosperity they will follow his example and throw them open to the commerce of the world. Nevertheless, whenever he is questioned as to his motive in making a fresh annexation or proclaiming a protectorate in Africa or elsewhere, he may justifiably plead as his excuse that such action was taken to secure equal rights for the trade of his own country.

The pessimists maintain, however, that the yearly trade of our possessions in Tropical Africa is so relatively small and so stationary or declining that it is not worth the expense and worry of their maintenance. I have repeatedly seen these statements made in print and heard them uttered in conversation, so I refer to them here. Otherwise it would seem that in accordance with the statistics given in official returns they could not be reasonably maintained.

For your satisfaction I will quote some figures from the Statistical Abstract for the colonial possessions of the United Kingdom, from the year 1869 to 1883, a blue-book published by Her Majesty's Government. In this we find that in the four West African Colonies of Lagos, Gold Coast, Sierra Leone, and Gambia, the gross amount of public revenue of the four combined was, in 1869, £155,481. This had increased in 1883 (which is the latest return we have), to £250,564. Moreover in that latter year, 1883, each of the colonies except Sierra Leone exhibited an excess of revevue over expenditure, which in the aggregate amounted to £12,652. The deficit of Sierra Leone for that year was quite exceptional, owing to some expensive public works. In the preceding years she could sometimes boast of a yearly surplus of three and four thousand pounds. Thus much for the question of paying their way. Now, as to increase of trade, I might remark that in 1869 the total value of imports into these four colonies amounted to £814,194, of which sum £689,097—more than three-quarters of the total—were due to Great Britain. In 1883, however, the value of imports rose to £1,549,495, and of this sum British trade benefitted to the extent of £1,001,479. Again, the combined value of exports from Lagos, Gold Coast, Sierra Leone, and Gambia, amounted to £1,419,535 in 1869, and in 1883 to £1,608,497, an increase of £211,038. In 1883 goods to the value of £725,347 were exported from these British West African Colonies to the United Kingdom, as against £708,673 in 1869, showing an increase of £16,674.

Although the colonies of the Cape of Good Hope and Natal do not properly come within the scope of this paper, as they lie beyond the limits of Tropical Africa, still I might mention that the revenue of Cape Colony rose from £593,245 in 1869 to £5,443,486 in 1883,[*] and that of Natal from £124,157 to £620,496 in the same interval of years. Moreover, the total amount of trade between the United Kingdom and Cape Colony in 1869 was £3,380,628, but in 1883 it was £9,299,332, while in a similar lapse of time that of Natal had risen from £548,153 to £2,078,091. These facts do not tend to support the theory that British colonies in Africa are unsuccessful ventures!

I believe also that the French possessions in this continent show a steady increase of commercial prosperity. The same fact is partially true of the Portuguese colonies, but in their case a better mode of government and a more energetic style of administration would probably triple the present value of the trade. The more one travels in Africa the more one arrives at the conclusion that the Portuguese have got the pick of the coast lands; but, unfortunately, another conviction forces itself upon the mind that they have far more than they can reasonably be expected to develop. There is no reason why they should sell, cede, or exchange them, but let them be thrown open unreservedly to all comers and to all capitalists, and Portugal would soon, as their suzerain, become a wealthy Power.

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[*] In 1884 the total revenue (including temporary loans) was £7,533,592, and the nett public revenue £2,947,951.—EDITOR.

Let us now, in conclusion, glance at the existing trade routes and trade centres in Africa, and the bearing they will have on the future commerce of the continent.

In my brief review of the physical characteristics of Africa 1 have already alluded to the principal river systems of the continent, and the facilities for intercommunication that they offer. They are, besides, to be remarked as main routes from the coast to the interior—in fact, the Nile, the Niger, the Congo, and the Zambezi were evidently intended by Nature, despite their preliminary obstacles, to become the four great highways of African commerce. This, in a sense, they are already, and as time progresses they will certainly be more and more used by the white man as a means of locomotion and transport. Fair cities and emporiums of trade will arise on their banks, busy steamers will churn their broad waters, and civilisation follow their lengthy courses.

But besides these devious arteries of trade impatient man has at various periods struck bold paths for commerce overland, altogether disregardful of natural obstacles, and following no means of water locomotion. These land routes are likely to greatly decrease in importance when the principal streams of Africa are navigated, but it may be that some day they will become the tracks of railways, and for this reason, and on account of their present value to trade, they deserve to be noticed.

Beginning on the north, we find three main caravan routes crossing the great Sahara Desert from the Mediterranean and the North Atlantic coast to the fertile regions of Central Africa.

One, which supplies the Morocco trade, starts from Mogador or thereabouts, passes through the city of Morocco, crosses the Atlas and the Anti-Atlas, traverses the desert at its narrowest, and reaches Timbuktu on the Niger, from whence its commerce is diffused by water carriage to all parts of the Niger basin. A branch of this important route used to go eastward, through Ghadames, to the Mediterranean. This is less availed of by the merchants than formerly.

The central caravan route across the Sahara passes in a tolerably direct line from Tripoli, through Fezzan, to Lake

Chad, where it serves the populous countries of Bornu, Bagirmi, Sokoto, and Adamawa.

The eastern road goes from Benghazi, in Cyrenaica, through the Kufra Oasis, and across the Lybian Desert to Wadai.

Passing round to the Egyptian Soudan we find, before the present troubles disorganised trade, several important land routes existed between the Red Sea, the Nile, and the interior. One used to go from Assiūt on the Lower Nile across the desert to Darfur. Another went from Kartūm through Kordofan and Darfur to Waida and Lake Chad. Then there was the too notorious overland journey from Suakin on the Red Sea to Berber on the Nile. Passing round to the south of Abyssinia we find no important or practicable land route save the road to Shoa, until the great eastern horn of Africa is rounded, and we find ourselves in the dominions of the Sultan of Zanzibar. Then we come within the attraction of the great lakes of Central Africa, and find that they are made the objective of the principal land journeys. There is one route which I have recently visited, which leaves the coast either at Mombasa or Pangani, converges at Kilima-njaro, and thence gives rise to two main branches, one going straight to the Victoria Nyanza and the other trending north-east through Masai-land. Then a little farther south we have the great main road to Tanganyika passing .through Ugogo, Unyanyembe, and Unyanwezi, and giving off a northern branch to the south shores of the Victoria Nyanza. There are one or two less important routes from the South-East Coast to Lake Nyassa, but they are at present chiefly used by Arab slave traders, and are unreliable and insecure. No doubt, with the much easier water communication with the Nyassa country up the Zambezi and the Shire, it will be long before the overland traffic is further developed.

There is really no important land route to the interior between the Zambezi and Natal, but there comes the great band of British Colonies in South Africa, and from their northern boundaries a great trade route passes from the Diamond Fields through the new protectorate of Bechuanaland, northward to the middle course of the Zambezi, with a western branch, which skirts the northern limits of the Kalahari Desert, crosses Damara and Ovampa-land, and touches the Portuguese possessions in South-west Africa, on the River Kunéné, whence it continues along a fairly well-made wagon road, three hundred miles in length, to the port of Mossâ-medes, on the Atlantic. Between this town of Southern Angola, in 15° south latitude, and the Cape of Good Hope, twelve hundred miles to the south, there is at present no recognised or frequented route into the interior, though occasionally a certain amount of traffic passes overland between Walvisch Bay and the Kunéné. But it is to be supposed that as the Germans have annexed so many miles of this coast, they will not be long before penetrating to the inland districts.

Farther north there are several important trade routes in Angola, between the three chief ports—Benguela, Loanda, and Ambriz—and the rich districts of the Congo basin in the interior. There is also a much-frequented track between Ambrizete in 7° S. latitude and Stanley Pool, where the navigable section of the Upper Congo comes to an end. In the regions of West Africa lying north of the line and south of the Senegal river there are no land routes for trade of any extent or importance, the small intercommunication that exists being effected by means of rivers. Between the northern bend of the Niger and the coast of Guinea there exists a region utterly unknown to Europeans, and untraversed by any recognised track of commerce.

The principal trade centres and emporiums of Tropical Africa, commencing on the west coast, are St. Louis, Dakar, and Goree, in Senegambia; St. Mary, Bathurst, Sierra Leone, Accrā, Lagos, Bonny, New Calabar, and Old Calabar, in the British possessions; Banana Point at the mouth of the Congo, and Boma on the lower course of that river; Ambrizete, Ambriz, Loanda, Benguela, and Mossamedes, in the Portuguese Colonies of Angola and the Congo; Walvisch Bay, the British part of Damara-land. Then, on the east coast, Quilimane, Mozambique, and Ibo, in the Portuguese East African possessions; Kilwa, Zanzibar, Dar-s-Salaam, Pangani, and Mombasa, in the dominions of the Zanzibar Sultanate; then, rounding the eastern horn of Somali-land, the ports of Zeyla and Berberah, British possessions opposite Aden; also Massowah and Suakin, on the Red Sea. In the interior we may mention Segu, Timbuktu, Sokoto, Lokoja, and Ilorin, in the basin of the Niger; Kuka and Kanem, on Lake Chad; Khartūm and Gondokoro on the Nile; Gondar and Ankobar in Abyssinia and Shoa; Leopoldville and Nyangwe, on the Congo; Rubaga on the Victoria Nyanza; Taveita at the base of Kilima-njaro; Tabora, in Unyanyembe; Ujiji, on Tanganyika; Malanje, Dondo, and Bihe, in Angola; Livingstonia, on Lake Nyassa; and Zumbo, Tete, and Sena on the Zambezi. All the emporiums of African trade which are situated on the coast are, with the doubtful exception of those in Zanzibar territory, possessed by European powers, among which are represented England, France, Portugal, Germany, Italy, and the International Congo Association.

Of the four great rivers, the English possess the lower half of the Niger, and the upper half of that stream may some day be claimed by France. The Congo basin belongs to the International Association mainly, with portions in the hands of France and Portugal. Portugal also possesses the lower half of the Zambezi, and the English may shortly be expected to extend their rule to the central portion of that river. There remains only to be considered the unhappy Nile! The English garrison its lower course, but its central and upper sections are masterless. So they will continue till the countrymen of Gordon pluck up courage and reassert the claims of lawful trade in the richest regions of Central Africa. In doing so they will confer a real benefit on the harassed populations of the Nile basin.

No force is so potent for civilisation as commerce, and nothing is so calculated to smooth the asperities of the roughest nations, and to promote friendly converse between man and man, as honest trade. The statesman or the explorer who gives to his country a new opening for its commerce has conferred on it and on the world at large a more valuable gift than the grandest of philanthropists, who would try to make men wise and good by moral force and subtle argument. Man at large is, unfortunately, a gross creature, only swayed by selfish reasons. For ten men of lofty mind, who will shape their conduct by precepts of high morality, you will find a thousand whose line of life is merely guided by questions of expediency. "Will it pay?" is the inquiry they invariably make before pursuing a certain course. I know this is a low estimate of human morality, but I fear it is a true one; and, after all, we are concerned with facts as they are, and not as we would wish them to be. What are the most potent reasons which deter a modern European nation from embarking on a great war? The horror of killing and causing to be killed many thousands of its fellow-creatures, or the fear of injuring its commerce and increasing its national debt? No. Those who have something to lose are generally prudent and pacific, and the peace of Europe has been oftener kept by commercial reasons than by the pleadings of philanthropy. If this is true of the civilised world, is it not also true of Africa? Does not legitimate commerce, wherever it enters, tame the fierceness of the people, and predispose them to a better mode of life? This, at any rate, was the belief of the greatest among African travellers—Livingstone—who certainly expressed it for no sordid motive. Therefore, the subject of my address to-night contains the germs of something higher and nobler than mere money-making; and therefore I urge upon you the conviction that the progress of religion, the establishment of peace, and the civilisation of mankind are intimately bound up with the commercial prospects of Tropical Africa.

BRITISH HONDURAS: ITS RESOURCES AND DEVELOPMENT.[*]

By Lieut.-Colonel E. ROGERS, F.R.G.S., Staff Officer of Pensioners, Manchester.

[Delivered before the Members of the Society at the Manchester Athenæum, October 14, 1885.]

BETWEEN 18° 29′ 5″ and 15° 53′ 55″ north latitude, and 89° 9′ 22″ and 88° 10′ 0″ west longitude, lies the parallelogram of territory called British Honduras, in contradistinction to its neighbouring notorious namesake, so-called Spanish Honduras—so-called I say, when it is remembered that although for 300 years Spain ruled despotically over this entire region, she does not now possess one rood of land throughout Central America.

British Honduras is a mere accidental insertion, so to speak, a tiny geographical expression in comparison with the vast provinces of Central America with which it is conterminous; but it is somewhat like Mercutio's death-wound—not small enough to be insignificant. In superficial area the colony is twice the size of Jamaica, and in profitable acreage nearly equals all the British West India Islands put together. The capital of the colony, Belize, is a neatly-laid out and picturesque town, each private house nestling in its own little greenery, the streets regular, and the public buildings commodious and of becoming architecture. The colony on the whole is a thriving one, and keeps a respectable balance in its treasury; the revenue in 1883 being upwards of £52,000 and the expenditure under £41,000. The margin is not very much, but it is better than nothing at all.

On reference to the map it will be seen that British Honduras is bounded on the north by the Peninsula of Yucatan, on the east by the Caribbean Sea, and on the south as well as on the west by the Republic of Guatemala; or, more particularly, as regards its western boundary, by an imaginary line laid down by convention in 1859 and completed in 1867, from a point on Blue Creek about eight miles west of the spot where the 89° of longitude intersects the 18° of latitude, to Garbutt Falls on the River Belize, and thence southward to the rapids of Gracias a Dios on the River Sarstoon. The extreme length of the colony is 174 statute miles, and its average width

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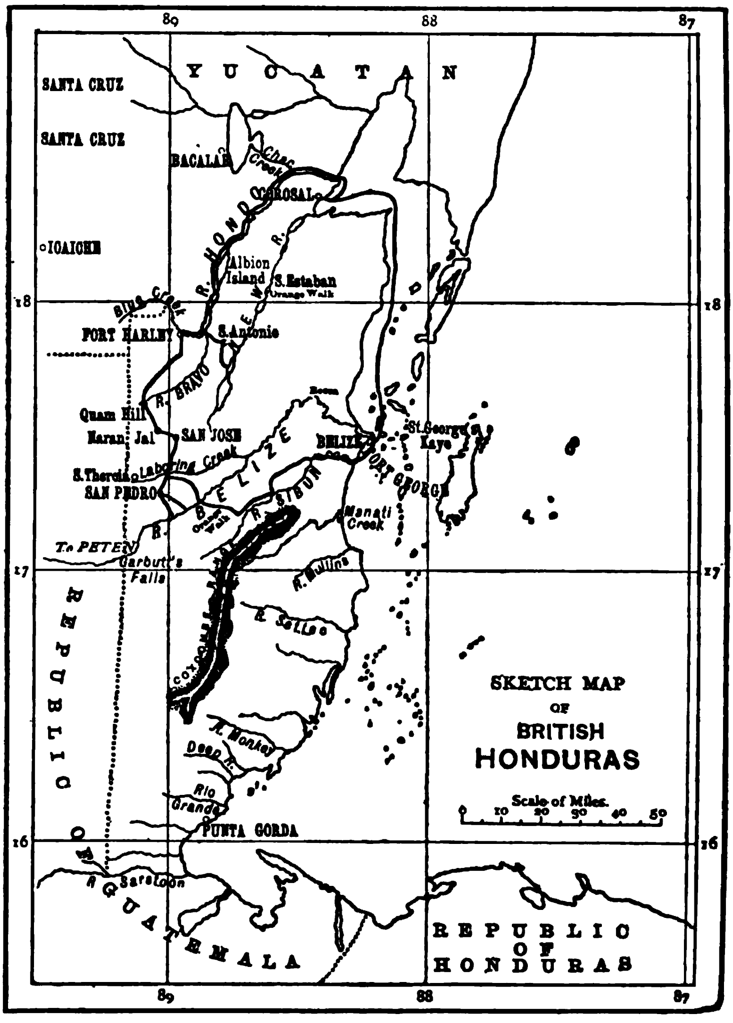
[*] Area, 7,562 square miles.
Population, 27,452
Revenue, 1883, £52,278.
Expenditure, 1883, £40,844.
Debt, *none*.
Imports, 1883, £268,973 (including £177,485 from the United Kingdom).
Exports, 1883, £302,869.
Shipping:—
Total tonnage, inward and outward (exclusive of coasting trade), 209,512 tons; British vessels, 84,701 tons.
Customs revenue, 1883, £25,737.
Crown lands can be purchased at 5s. per acre, or leased at 5d. per acre.
—*Statistical Abstract.*

68 miles, containing an area of 7,324 square miles, or counting the Islands or kayes which fringe the coastline, the total area of the colony is 7,562 square miles; a slice of territory which in these days of colonial "land-hunger" may be regarded with



SKETCH MAP OF BRITISH HONDURAS, AS DRAWN UNDER THE DIRECTION OF LIEUT.-COL. ROGERS, F.R.G.S.

considerable complacency. In physical outline British Honduras has a like configuration to that of adjacent Central American States; flat and swampy along the coastline, then pine and cohoon ridges, next, primeval forest land, broken here and there by lofty hills and sometimes considerable savannahs, and finally, mountain ranges, which run with more or less continuity along the western frontier.

To the credit of the Royal and other Geographical Societies, there is an increasing demand for information respecting our colonial possessions. And not content with knowledge of their present value or capabilities, there is a laudable desire on the part of many to rake up the past history of such colonies and to trace their growth from the earliest efforts of our enterprising settlers. Not always do such beginnings bear the light of research turned too fully on them, for whatever injustice was done, without doubt in those days "might was the right of the strongest." Nevertheless, a narrative of the manly, ambitious, and indefatigable efforts of the Baymen, as they were called, to establish themselves on the shores of Central America would prove to be, if not a profitable study, at least an entertaining romance. It is, however, not my purpose to go into a detailed account of these proceedings, much less to dwell at any length upon the ancient history of the country at large, but to cull from the pages of local records such facts as may be interesting in themselves, or which tend to throw light upon the subsequent development of the colony.

Herrera, a Spanish writer, tells us that Columbus arrived off the coast on the 17th August, 1502, and landing took possession of the country in the name of his sovereign, calling it Honduras from the word *hondura*, depth; the soundings having been found unusually deep. Be this as it may (for Stevens and other writers are not in accordance) the aborigines of Yucatan and the country to the south were at this time evidently branches of a great nation, divided into several tribes. In Yucatan, Maya Indians prevailed, and to the south the shore-line was peopled by Waikas, "remnants of which tribe," says Mr. Robertson Gibbs, in a recent historical work, "still exist and may be seen in Belize daily." Theories without number have been formed as to the origin of these races, but it has been well remarked that in prominent cheek bones, contracted forehead, long straight hair, and also in their small hands and feet, they resemble the red men of the north. On the other hand, the archæologist, or ethnologist, can point to similarity of customs, traditions, language, and architecture, as evidence of their Israelitish, Egyptian, Afghan, or Phœnician derivation. Whatever be the ancient history of the Aztecs, it is quite certain they possessed an architectural genius and individuality second to none in the civilised world; although their skill in this respect was strangely inconsistent with personal adornments, systems of agriculture, or methods of warfare.

Quite a halo of romance surrounds the earliest British occupation of Honduras. The central hero of the story being a Scottish rover or buccaneer, named Wallace, whose cognomen is supposed to survive in the name of the capital, Belize. It was the practice of these privateers to set fire to all homeward-bound Spanish vessels laden with logwood, having first stripped the ship and crew of everything valuable. But one Captain James having made such a capture, brought vessel and cargo to London, and he was agreeably surprised to find a ready sale for the logwood, while he was equally chagrined to remember that he had been using as fuel during the voyage wood valued at £100 a ton.

Thus the privateers found it more profitable to search for wood on shore than fight for it on sea, and English woodcutters accordingly increased and multiplied, until after capturing the Bay Islands they swarmed into the adjacent continent, and finally established themselves at Belize. Nearly a hundred years later on, in 1754, the Spaniards, exasperated by the continued prosperity of the Baymen, assembled a force of 1,500 men at Peten and marched upon the old river works. They reached Labouring Creek unopposed, but here they were met by the Baymen and their slaves, and suffered a signal defeat. Soon after this, Vice-Admiral Burnaby and the famous Captain Cook arrived at Belize, and assisted in drawing up a code of laws which became the *magna charta* of the settlement. The seat of government was fixed at St. George's Kaye, a tiny island, ten miles from Belize (now used as a sanatorium), and here in 1798 the colonists were once more attacked by the Spaniards. The assailants numbered fourteen ships and a flotilla of boats containing 3,000 troops under General O'Neil, who, though evidently hailing from green Erin, was a field-marshal of Spain. The British force, in addition to local levies, consisted of H.M.S. Merlin, a few small craft and detachments of the 63rd, now the Manchester Regiment, the 6th West India Regiment, and a battery of Royal Artillery under Colonel Barrow. The action was fought off St. George's Kaye and lasted two days, with the result that this local armada was driven off and dispersed; and thus terminated the last attempt to dispossess the brave Baymen.

Since that memorable year we have held British Honduras by right of conquest in addition to claims of occupation, and in 1803 Fort George was built on a little island in the port as a substantial announcement of the fact. In 1862 the Settlement was raised to the rank of a colony, and in 1870 the "customs" created by Burnaby's Code were abolished, and British Honduras is now a Crown colony under a governor, assisted by a legislative council consisting of five official and four non-official members.

The troubles which have affected the growth and prosperity of the colony have, of late years, sprung invariably from our northern frontier. Ever since 1849 the Yucatecans, or Spanish half-breeds in that province of Mexico, and the Indian aborigines, have occasioned anxiety. The former, not finding sufficient protection from their own government in Merida, took refuge about 35 years ago in British territory, and here, at Corosal, they were constantly subjected to raids and reprisals. For more especially had the Indians, of Bacalar, a town near our frontier, under their renowned leader King Puc, won their independence from their Spanish oppressors, and their hatred was not unmingled with contempt. I am sorely tempted to diverge from my subject and relate the experiences of two officers who were sent on a mission to the head-quarters of these Indians, and witnessed their superstitious ceremonies in connection with an oracular cross which governed their actions. But I am reminded of the limited time at my disposal, to say nothing of the additional tax upon your patience which the rather lengthy anecdote would involve; perhaps, however, permission will be granted to let it appear in the form of an appendix to this article in the journal of the society.

In pursuance of the object in hand I propose first to describe what I saw myself of the country in its northern division; next, to quote from the diary of a recent explorer who traversed the southern portion, and close my observations with a general reference to the capabilities and prospects of the colony.

The modern history of British Honduras may be said to date from the year 1867, as until then the resources of the country were practically unknown, and, except to the wood-cutting monopolists, the interior was a veritable *terra incognita*, undeveloped and untraversed. During the previousyear, certa in Indians, under a chief named Canûl, had invaded our territory and spread confusion and terror wherever they appeared. These murderous attacks were made by Canûl under pretext of recovering payment for the right of cutting mahogany on the Yucatan frontier, a practice which obtained to some extent, and against which the Merida government had very naturally protested. On the other hand, the Spanish authorities were themselves powerless to enter into contracts which the Indians could at any moment render nugatory, for, as stated, they had signally failed to subdue the rebellious natives, or reduce the country to any degree of order. Under these circumstances, a reciprocal arrangement had been entered into between some of the Belize merchants and the powerful tribe of Bacalar or Santa Cruz Indians, the tribe which had so conspicuously won its independence. The band of marauders under Canûl were only a distant offshoot of this tribe, and were called *Ycaiches*. It therefore became a delicate question to check the demands of the Ycaiches while keeping on good terms with King Puc, and some thought that to pay neither would meet the case. Thus it is that all our little wars spring more or less from preventible causes, and are in most cases the result of the rapacity and injustice of a few unprincipled traders. To add to our difficulties, the Alcalde of San Pedro, a village within our boundaries, played a perfidious part by inviting Canûl to cross the Hondo, the Rubicon of our territory. At this juncture, a British force, insignificantly small if intended to effect Canûl's subjugation, and provokingly large as an escort to the Civil Commissioner who was empowered to negotiate with the chief, advanced to meet the invaders. After a heavy night's march along mahogany truck paths, the detachment of West India troops was assailed by the Indians, and in the brush which ensued six men were killed and sixteen wounded on our side. Unfortunately, during the engagement, the major in command ordered the bugler to sound "the retire," and thus, although the Indians had in reality been defeated, our retreat turned the scale in their favour, and produced consternation in Belize. Assistance was at once demanded from Jamaica, and within a few hours of the receipt of the news, H.M.S. "Doris" was despatched, having on board a reinforcement of the 3rd West India Regiment and other troops —including my Company—under command of Colonel Harley. The Governor, Sir J. P. Grant, accompanied us in person to Belize, which we expected to find reduced to ashes and the inhabitants massacred or intrenched, but fortunately no attempt had been made against the capital.

On the 29th January, 1867, Sir J. P. Grant returned in the Doris to Jamaica, having full confidence in the measures taken for the prompt punishment of the marauders and the future security of the colony; and on the following day the expeditionary force under Colonel Harley proceeded on its mission. The little column consisted of 300 men of all ranks, and seventeen officers, whilst in the Northern district was a company of the 3rd W. I. Regiment, which had orders to cooperate with the movements of the troops advancing from the south. The route chosen was to ascend the river Sibun in flats, and striking across country, to gain Orange Walk, on the River Belize, simultaneously with the arrival of provisions in a fleet of pit-pans, which had been despatched up that river under escort a few days previously.

The weather unfortunately was most unpropitious and continued so throughout; rain, such as Honduras only knows, fell in an incessant torrent, swelling creeks into rivers, ponds into lagoons, and rendering the already difficult forest paths mere indistinct windings through swamp and jungle, diversified by occasional mud tracks over the pine ridges or steep hills of the interior; but despite these difficulties of climate and country and others of a more serious nature, as regards defective commissariat arrangements, which were under Mr. Robertson Gibbs (who evidently is a better compiler of history than he was a commissariat officer), the column accomplished its toilsome march from the point of disembarkation on the River Sibun to Orange Walk, a distance of 50 miles, in three days. Here was presented to view a burst of scenery truly magnificent—large trees, the growth of centuries, chequered the grassy slopes down to the water edge, except where the bank rose in places with wall-like abruptness above the rushing Belize, which passes beneath in a grand stream of from 50 to 60 yards in width. A halt of a day or two was made at this fine open position, on account of the unexpected difficulty of procuring guides, for out of the many hundred Creole woodcutters, employed in these vast forest lands, not one had volunteered, or could be induced to lead the column to its destination in the unknown region beyond the river. At length two guides were obtained, of whom one was an Indian, and the other a man who was notoriously suspected of being an incendiary and murderer, and on the 7th February, the troops advanced by a flank march from Saturday Creek into a strategic position within three miles of San Pedro. The road thither was a second edition of the first portion of the march, but annotated, so to speak, by extra hardships and privations. At one time literally strung up by rope-like parasites; now struggling in the grasping embrace of creeping tendrils; anon slipping into deep holes, or plunging recklessly along the narrow paths; panting from the exertion and the stifling heat; drenched with torrents from above and saturated in the nether extremities whilst fording innumerable creeks; without breakfast or the likelihood of supper (for the commissariat department had again failed us), the troops toiled on uncomplainingly through a perfect labyrinth of trees for 17 miles. Words are insufficient to enumerate the misfortunes and trials of temper of that memorable line of march, until at night, wet and wearied, officers and men lay down together in dripping uniforms on the open bank of Yalbac Creek; and here, without food or drink, with no protection from the soaking ground beneath, or the sky above, except that afforded by palm leaves, covered with insects and worried with flies, we passed a miserable night. The pests of life in Honduras are the flies and insect creation. On the seacoast sandflies and mosquitoes, and in the interior, black *botlasses*, or bottle-shaped flies, and warraticks swarm in myriads, and commit their bloody depredations on all parts of the person. Warraticks are so small as to be scarcely visible to the eye, but they come off the leaves of trees in millions, as you brush along the woodland paths, and burrow into the flesh. The best method of removing these little monsters we adopted at Yalbac, which was to lie down in a shallow stream and allow little fish to peck them off, which they did most viciously. The sight of 17 officers so engaged would be a fitting caricature for *Punch*.

Supplies and guns not being up, the assault on San Pedro was necessarily deferred until the morning of the 9th, when the column moved off (having first cleared its front by the discharge of a few rockets and shells) along a path which wound round the base of a steep hill into a narrow gorge, a sort of Pass of Thermopylæ, which might have been easily defended, and suddenly descended into the basin wherein the notorious stronghold lay. But clearing for action was soon found to be unnecessary, for, with a wholesome dread of meeting regulars, the Indian invaders had decamped, leaving suspended in their Fiesta-Hall a letter from their chief to the effect that having taken with them their goods and chattels, their wives and little ones, they were in the words of the old song—

O'er the hills and far away.

The town, consisting of mud huts, with one or two buildings of a more pretentious character, was immediately burned by the disgusted troops, and we returned to camp at Yalbac with a thorough contempt for so cowardly an abandonment of what might have been made an impregnable position. The excitement of the next few days consisted in foraging for cattle, as the carriers had failed to bring up provision in sufficient quantities, and this amateur buffalo-hunting compensated in some degree for the monotony and discomforts of camp life in wet weather. The cattle were of course the property of the villagers, if almost wild animals can be called such. The Indians simply shoot or lasso them when required, and it is by no means easy work to stalk them.

On this occasion Colonel Harley sent for me, as I was known to be a fair rifle shot, and entrusted me with the undertaking. "As the enemy may be in our vicinity," he went on, "you must keep a sharp lookout for them as well as for the cattle; you can take with you two officers to act as scouts, and to mark where the animals fall, so that we can send out to recover the carcases at night." One of the two officers I immediately chose to accompany me, and in whom I placed implicit confidence as a cool-headed, alert, and plucky companion in danger, was Lieut. Jaleel Brenton Carey, who afterwards gained such unenviable notoriety in connection with the death of the Prince Imperial. We were most successful, and for four days we fed the column with excellent beefsteaks. On the morning of the 12th February a flying column was directed to march under my orders to a suspected village named San José. It lay about 16 miles to the north of Yalbac, and was rapidly reached in light marching order by a path that at some points climbed over hills rising precipitously to a height of a thousand feet, and as suddenly descended into a jungle-swamp, until lost in the usual intricacies of the forest. I halted the men on the top of one of these eminences, and addressed them as to the nature of the service on which we were engaged and the cunning character of our enemy—above all I enjoined a silent and swift advance. Unfortunately, information had not reached Col. Harley before despatching my force that the rebel inhabitants of San José, in concert with the Ycaiché Indians, had only a few days previously returned laden with plunder from a raid on a settlement in the northern district named Indian Church; but as their complicity was only suspected they had to be given the benefit of the doubt, and my instructions had been framed accordingly.

Perhaps it may not be considered irrelevant to narrate what occurred, as given in my official despatch :—

"Camp, Yalbac, 13th February, 1867.

Detail, all ranks:

Rocket party, Royal Artillery	5
3rd W. I. Reg.	50
4th W. I. Reg.	50
	105

"Sir,—I have the honour to report, for the information of the colonel commanding the field force, that the column (detail as per margin) detached on special service yesterday under my command, succeeded in making a forced march of sixteen miles against San José in five hours.

Lieut. Carey
Lieut. McCullagh
Staff-Asst. Surgeon Bates

"On arrival at the outskirts of the village (which is entirely surrounded by bush and is situated in an almost impregnable position) I sent forward Peebles and the other guide in accordance with instructions annexed. But scarcely had they made their appearance when both these men came rushing back, the former exclaiming 'They are coming, they are coming, and they fired on us!' I immediately extended the advance guard, placed the rocket tube in position, and directed the main body as they arrived to deploy into line behind a heavy piece of timber lying crosswise on the ground. Fire was opened on us by the enemy in several volleys, while the rockets were being screwed on; happily attended with no serious casualties. Ignorant in what numbers the enemy were present, I deemed it prudent to let them have a few rounds of rockets successively, and so soon as possible, I led the right subdivision, or 50 men of the third W. I. Regiment, at the charge into the village, leaving Lieut. Carey and the left subdivision to cover our advance.

"Unfortunately for my purpose, the rockets had acted so effectually, together with a steady volley delivered by the 4th West men, that none of the enemy remained to be taken, all had fled into the bush, flinging down in their trepidation guns, bags of pellets, &c. I cannot personally state as to the effectiveness of our fire, the bush was so thick, but the object chiefly in view, to drive the enemy off, was accomplished. I then burnt the village. The Indians had evidently been taken by surprise (which I venture to affirm is without precedent), as the houses were full of property, and even cooking utensils were found on the fires in several huts. Our men discovered and brought away pieces of the 4th West India greatcoats and waterproof sheets lately lost; thus proving the complicity of this people with San Pedro. This I did not ascertain until after the destruction of the town. Without unnecessary delay (the whole affair having only lasted about half an hour) I reformed, and we returned to the cantonment, accomplishing this fatiguing journey in six hours. Two men of the Royal Artillery were hit with spent bullets during the engagement, but with the exception of one man of the 3rd W. I. regiment, who, while standing near me received, a bad gunshot wound in the temple, I am happy to say the expeditionary force returned as it left Yalbac in the morning. In conclusion I cannot too highly praise the conduct and steadiness of Lieuts. Carey and McCullagh, the former in command of the support and the latter with the skirmishers on our right front during the advance. As regards the men I have only to add that they behaved admirably, and performed this feat of marching 32 miles in eleven hours without a single man falling out, along a hilly path in a difficult and I might almost say impracticable country.—I have, &c.,

"The Field Adjutant, "E. ROGERS, Captain, 3rd W.I. Reg.
Camp, Yalbac, B.H." Commanding Special Service Detachments.

The day after our return a second flying column, under Captain Edmunds, 4th W.I. Regiment, was directed to strike a village called Santa Theresa, which lay a few miles to the west of San Pedro; but the expedition returned after a fruitless march, having found the village deserted.

On the same day, provisions and reliable guides not being procurable for the intended march to Blue Creek, it was determined to break up camp and retire to Orange Walk, and thence to Belize, so as to proceed by sea to the River Hondo, and from its junction with Blue Creek strike the villages in the north-west territory. The night of the 13th February the troops passed amid the ruins of San Pedro, and on the following morning the column moved on the River Belize in two divisions, one passing by a new route for the purpose of reconnoitering a position called "Young Gals," and the other, detached under Captain Edmunds, to enable his men to pass over the ground of the engagement three months previously; and they had the melancholy satisfaction of finding the remains of their comrades untouched, and of paying the last tribute to the brave who still lay as they fell, with their faces to the foe. I may take this opportunity to remark *en passant* that rockets are useless missiles for bush warfare, and are more dangerous to friends than enemies. Having studied the subject for many years, I am convinced that Gatling guns (which are by far the best and most reliable type of machine-guns) are the only weapons adapted for such service as I have described.

Thus ended the first chapter of our little campaign, and on the 21st February the troops reached Belize in pit-pans (long flat-bottomed boats propelled by paddles) in thirty-three hours from Orange Walk. The only mishap that befell us on passage was the upsetting of a small pit-pan containing nine men in addition to the crew. The boat ran on a crag midstream, and was cut in two, precipitating men and rifles into the seething torrent. Fortunately no lives were lost, and even the rifles were subsequently recovered by divers some hundreds of yards below the spot where the catastrophe occurred. This rapid (of which there are several in the upper waters of the Belize) passes under the euphonious name of "Pull and be d——d," for the simple reason that in paddling up-stream not to do so would be to court disaster. There is nothing new under the sun, even in profanity of nomenclature, for by a curious coincidence I find that the following anecdote is told by the author of "Voyage of the Paper Canoe from Quebec to the Gulf of Mexico," published in 1878. Mr. Bishop writes: "While navigating Cooper River, as the heavy mists rolled in clouds over the quiet waters, a sail-boat rowed by negroes emerged from the gloom and as suddenly disappeared. I shouted after them, 'Please tell me the name of the next creek.' A hoarse voice came back to me from the cloud, 'Pull and be d——d!' Then all was as still as night again. To solve this seemingly uncourteous reply, so unusual in the south, I consulted the MS. charts which the Charleston pilots had kindly drawn for my use, and found that the negroes had spoken geographically as well as truthfully." On arrival the troops received the thanks of the colonial authorities for their arduous and important service. In addition to this, as a definite recognition of the objects already attained, as well as for the more effectual control and organisation of the local contingent forces, Colonel Harley was appointed by the Governor Brigadier-General, and I was in turn gazetted Brigade-Major. A full parade of the regular militia and volunteer forces in the colony was shortly afterwards assembled in Newtown Barracks, on the occasion of the presentation of the Victoria Cross to Private Samuel Hodge, 4th West India Regiment, who had won that glorious distinction in Africa the year before, and his is the only case on record of a black man so decorated. It was a most imposing ceremonial, and after the presentation the troops "marched past" Private Hodge, who stood at the saluting base on the right of the Lieut.-Governor, Mr. Austin, and Brig.-General Harley. The object of the expedition to the north now became two-fold, as not only was the district to be cleared of the enemy, if any remained, but the western boundary line was to be defined in such manner that no question might thereafter arise from ignorance of the exact limits of the colony. For this latter service, Lieutenant Abbs, R.N., had been commissioned, who having accompanied the force in its vicissitudes in the field, now prepared to discharge his own most difficult task of cutting through virgin forest from Blue Creek to the longitude of Garbutt Falls.

On the 26th February the little colonial steamer Enterprise proceeded with the troops and Chinese labourers to Corosal, *en route* to Blue Creek; but, on arrival there, a rather anomalous state of affairs was found to exist. Out of the entire population scarcely a hundred remained in this important frontier town, and these were in hourly dread of invasion by Santa Cruz

Indians. One brave Scotch lady, whose husband was serving with our troops as a volunteer, would not desert her home, and we found her fully prepared to receive friend or foe, for on her table was a substantial meal for us, and a pair of revolvers for the benefit of any intrusive Indians! It will interest you to learn that this plucky little lady was the daughter of Mr. Abernethy, the famous engineer, well known in Manchester by his connection with the ship canal. To explain fully this new feature in the operations, it would be necessary to recapitulate the antecedents of Corosal. Suffice it to say that the inhabitants, being mostly fugitive Yucatecos, or half-castes, live in constant dread of the vengeance their acts in times past very naturally provoked. But the policy of the Belize community was to keep up friendly relations with the Santa Cruz Indians, whence flowed a lucrative trade; and as the *sine quâ non* of this mutual understanding depended on an unfailing supply of munitions of war to enable the Indians to maintain their independence, the latter were at this time naturally indignant, when, in consequence of these frontier troubles, a law prohibiting the export of ammunition was passed, more particularly as the Santa Cruz Indians disclaimed sympathy with the Ycaiches.

The colonial government, having come to the conclusion that the present was a time to relent, issued a permit for the sale of powder as a conciliatory measure, and a large quantity was accordingly sent up from Belize. Intimation of this fact having reached Corosal, the Spanish sympathisers in the cause of Merida at once resolved on its capture, and it was seized at the mouth of the Hondo, within a few miles of where the Indians were awaiting its arrival. In the scuffle that ensued the Indian in charge of the powder was shot to death.

Naturally indignant at this wanton act of piracy on the part of a people living under the protection of the British flag, the Indians assembled in great numbers on the banks of the Hondo, but, with a forbearance more prudent than characteristic, they simply asked for redress through the ordinary channels of the law. The timid people of Corosal at any rate did not give them credit for peaceful intentions, but, on hearing of the movement, rose *en masse*, and fled away in boats across the bight further into British territory.

To restore confidence in the deserted village a detachment of troops was now disembarked, and it was gratifying to notice the almost immediate result in the straggling return of the terrified inhabitants.

Meantime the Enterprise proceeded up the Hondo, and all along the banks the Santa Cruz Indians flocked in crowds to greet her progress, an unwonted sight to them, being the first steamer they had ever beheld.

On the evening of the 2nd March, anchor was dropped 90 miles from the coast at the meeting of the waters, where the rippling streams of the Bravo and Blue Creek unite with the sluggish Hondo, amid a scene both striking and novel in the bold character of the surrounding country. Close by, the sombre forest fringed the banks with a rich drapery of tendrils and parasites, here and there opening into a vista leading to the park-like pine ridge; while on the Yucatan side, a lofty range of hills, which in an unbroken chain belts the river-board almost from its mouth, here terminated abruptly in a sheer limestone rock as smooth as quarried marble. Some four miles above this point, a Company of the 3rd W. I. Regiment had entrenched themselves on the banks of Blue Creek, in a very creditable field-work, which the officer in command had christened Fort Harley, and from this post on the morning of the 7th March, a flying column was organised, consisting of 100 men made up from the regulars and British Honduras Militia, together with a rocket party of Royal Artillery, under command of Captain Delamere, 3rd W. I. Regiment, and despatched against a village called Narajal, where it was rumoured the enemy had taken a last stand, but it was deserted before Captain Delamere's approach, except by a few Indians who immediately bolted. In the village were found several freshly dug graves, which on examination proved to be those of Indians who had fallen at San José. The result of this expedition proved incontestably that the invaders under Canúl had withdrawn. Further, it answered the double purpose of traversing and reporting upon the entire district, Narajal being only five or six miles distant from San José. Everywhere signs of rich natural wealth prevailed. The provision grounds teemed with fruit and vegetables. Fat cattle browsed in succulent pastures. Tobacco, vanilla, and other useful plants and vines abounded under the shade of gigantic trees of the most valuable woods. Gently sloping undulations inviting the growth of coffee and cotton, and valleys where sugar or rice would thrive to perfection, alternated with precipitous rocky eminences of over 1,000 feet and healthy open pine ridges, with streams, creeks, or lagoons almost at every mile of travel. Of such character is the country lying between the Hondo and the Belize—a stretch of territory which ought to support, if not enrich, a population equal to that which inhabits the entire colony.

Meanwhile, Lieutenant Abbs, R.N. made some unsuccessful attempts to reach the boundary, having to force his way slowly with axe and macheate over a country, varying as usual in impracticable ascents, and treacherous swamp land, thickly studded with primeval forest. Eventually, however, with the additional assistance of soldier-labourers (as the Chinese labourers were found quite unfitted for the work), he reached the westernmost point of Blue Creek, and according to his instructions succeeded in running the desirable boundary line to the longitude of Garbutt Falls.

On the same day that the column moved against Narajal, the Brigadier-General, accompanied by me as Brigade-Major and an escort of 10 men, started to ride across country a distance of 40 miles to Indian Church, on the new river lagoon. Our progress on mule back was necessarily slow owing to the narrow forest paths, interlaced at places with suspended vines which had to be cut away, and night overtook us just as we reached the deserted Indian village of San Antonio, where we halted. To guard against surprise the Brigadier and I arranged to take watch and watch about during the night, so having posted our sentries, I besought the General to be allowed to take the first snooze. Accordingly I lay down on an extemporised couch in the shape of a form which happened to be left in front of the altar in a little Indian chapel where we had established ourselves. As I was greatly fatigued I snored melodiously! and my chief could not find it in his heart to disturb me. It was therefore quite possible that, as the Irishman once said, "I might have woke up to find my throat cut!" Early next day we suddenly came upon the half-buried ruins of an unmistakable Aztec palace. A wide terrace with sculptured steps, overturned columns trellised with creepers, massive stone walls, whose delicate tracery and skilful hieroglyphics are now completely enshrouded with the clinging mosses and undergrowth of ages, covered an area of more than an acre, but so thick is the scrub of prickly mimosa and cactus, so voluminous the tendrils of bush-rope which festoon the mahogany and other trees towering over all—their branches and huge trunks entwined by parasites and orchidaceous plants —that the spot might be passed by a traveller without noticing any portion of the terrace and the lines of circumvallation which attest the extent of these mysterious ruins. I may here briefly refer to a very interesting paper read by Mr. A. P. Maudslay before the Royal Geographical Society on the subject of his explorations of the newly-discovered Indian ruins of Tikal and Usumacinta, and which is to be found in the "Proceedings" for the month of April, 1883. The city of Tikal must have been one of the most important in the country. Mr. Maudslay describes it as being laid out on a rectangular plan, and wherever there were differences of elevation the ground was terraced and the slopes faced with carefully-laid squared stones. The most imposing buildings he found were five temples, raised on pyramidal foundations, supposed to be for sacrificial purposes, and of these he took photographs showing their elaborate carvings. Now if you will consult the map you will see that these ruins of Tikal lie 25 miles only to the west of San Pedro, and are easily accessible from the river Belize. The chairman, Sir J. Lefroy, expressed his gratification that an Englishman had entered the lists with the various scientific foreigners who were exploring this region, and he went on to remark that the country was not 100 miles (figuratively speaking) from a British frontier, and it would be very hard if harvests were reaped there by Frenchmen and Germans instead of by Englishmen through the apathy of the British or the Colonial Government. "There is," he added almost pathetically, "an unread chapter of history in the ruins." Scientific and systematic excavations have, in fact, never been carried out, owing to the remoteness and other difficulties of their situation, but it is my personal belief that vast treasures will yet be unearthed from these scattered mausoleums of a vanished race. The intervening region between the ruins referred to and Indian Church is not so wild, but the monotony of the sombre forest is quickly relieved by the sight of a wide expanse of water, and the extensive canefields of the settlement. This was the place attacked and plundered by the San José Indians a few weeks previously, and who had paid the penalty of their misdeeds under my hands. Strange to say the enemy had not attempted to burn the sugar-canes or destroy the mills, but had contented themselves with killing a few labourers, firing the principal dwelling-houses, and looting the horses, mules, and other live stock. No resistance had been offered, although several Yankees, armed with revolvers and bowie knives, were on the estate, and 70 stand of arms were quietly removed by the Indians, while the settlers remained *perdu* in the cane-piece or skedadled hurriedly to the boats. One poor Yankee apothecary was captured in his medicine-room, and, as he informed us, with a rueful countenance, he expected instant decapitation, but Canûl had an eye to business, and he evidently possessed a keen sense of the ludicrous. Some of his men had foot-sores or ailments of various kinds, and these were paraded before the Yankee to be doctored. The chief grimly smiled to notice how soothing were the effects of the ointment and other external applications which the apothecary gladly dispensed, in the hope of currying favour. But, poor man! he was quite taken aback when he went on to offer pills, jalap and castor oil for internal consumption. The chief himself wanted to be dosed, but he naturally "suspected this Greek through offering gifts;" so he unconsciously followed the example of great kings and potentates of former times, by forcing the unfortunate Yankee to take pill for pill and dose for dose, as he and his men were individually served with each nauseous, if not noxious drug! That the apothecary survived the ordeal was only due to the deteriorated condition of his stores and his own strength of constitution; at all events the Indians gave him the benefit of the doubt by leaving him, as they thought, to certain death.

A small detachment of Honduras militiamen were now in military occupation of the place, and drew up in line to receive us, under the command of a young colonial officer, who a few days afterwards met an untimely fate by the bursting of an engine boiler. Agonised by his scalding pains, he rushed down a slope into the lagoon, and was unfortunately drowned.

Passing down New River in a pit-pan, the brigadier next visited the villages of San Esteban and Orange Walk (not to be confounded with the settlement on the Belize or Old River) an outpost which five years subsequently formed the objective point for another invasion by the Indians, under Canûl, on which occasion he was routed and slain by a detachment of the 1st W. I. Regiment, under Lieut. Smith, who for his coolness and pluck was promoted to be major, whilst Assistant-Surgeon Edge, who fought bravely in defence of the barrack enclosure, was granted a step of rank, and a civilian, by name Oswald, who materially assisted these officers, received the order of St. Michael and St. George.

Thus, as the primary object of the expedition in 1867, namely, the capture of Canûl, dead or alive, was only accomplished some years afterwards, it may be asked what material advantages accrued to compensate for the exposure and hardships to our troops and the expense of their maintenance in the field? They were these: A fruitful interior hitherto unknown even to the inhabitants of Belize was scientifically surveyed and reported upon. The unhealthy, unimprovable low-lying sea coast was left behind, and a lofty region reached which rivals the fertile mould of Barbadoes, or the rich uplands of Jamaica. The luxuriant provision grounds of San Pedro, Santa Theresa, San José, and Narajal were visited, and our settlers throughout the colony induced to think that what Indians were able to accomplish well, they, with every appliance of modern art and science, should do better. A spirit of enterprise was fostered among the merchants of Belize, and they were encouraged to develop the internal resources of the colony. Legitimate commerce was carried on with the Indians. Trade with the United States was gradually entered upon. Many self-ostracised emigrants of the Southern States availed themselves of the opportunity to settle under a free and constitutional government. Grants of crown lands were eagerly sought. The system of monopoly, which allowed a few wealthy firms connected with the timber trade to cramp the development of the colony generally, was entirely broken up, and large tracts of land held under it became the property of energetic and capable citizens, who no longer confined their attention to mahogany and logwood, but planted sugar-cane and coffee and every description of fruit and vegetables, thus opening up a fresh source of wealth and prosperity for the community at large. Such were some of the immediate results which may be claimed by the surviving officers of the expedition (scarcely one-third of those who served in it being still to the fore), and which at the time tended to restrain if not to nullify the captiousness of local ingrates who were inclined to carp at the expenditure, and who have since endeavoured to discredit its pioneering efforts and its military achievements.

In 1879, Mr. Fowler, Colonial Secretary, traversed the colony from the upper waters of the Belize to Deep River, which flows into the Bay of Honduras, in latitude 16° 20′. It seems strange, but it is nevertheless a fact, that until then this entire tract of country had been unexplored. Mr. Fowler made a detour from Garbutt Falls, into Guatemalian territory, towards Peten, a most interesting locality, not only on account of the mythical stories connected with the undiscovered city in its neighbourhood, where the inhabitants reside in luxury and ancient greatness, nor yet on account of the skeleton of a horse which Cortez had ridden during his celebrated march, and which is said to be still extant in Peten, but because a modern coffee plantation has been started hard by under favourable auspices, which bids fair to revolutionise the habits and customs of the wood-cutting communities on the border.

I cannot, however, follow the explorer to the village of Dolores, but joining him at the exact intersection of 84° west longitude and 17° north latitude, I propose to keep steadily in his track, although I cannot attempt to give the details of his most interesting itinerary.

On the 29th December, 1878, Mr. Fowler, accompanied by two European companions, one of whom was a professional miner, and thirteen Indian carriers, waded a large creek running north and west, showing that he was on the "divide" of waters running east, north, and west. In the afternoon his road skirted a forest, where game was plentiful and baboons howled away down the valley, making night hideous, and he camped in a belt of timber by the side of a stream, which showed fair indications of gold prospects. A miserably wet morning followed. Still skirting the forest, and mounting gradually, he ascended a ridge 2,500 feet above the level of the sea, and saw the offshoots of the Cockscomb range, bearing E.S.E., about twenty miles off. He writes: "The country around was bare—more of a plateau with gentle undulations; there were few trees, the oak and the crabboe taking the place of pines; the grass was scanty on the heights but luxuriant in the hollows." Some of the windings through the grass looked like little regular pathways, but, on closer inspection they proved to be the trails of tapir and deer, which abound in this region.

On the next day (the 31st December) Mr. Fowler and his party crossed a stream, the bed rock of which was slate with quartz, overlooked by a fern-covered steep hill. Proceeding onwards they found themselves amid rocky gulches, where they had to pass their packs down by ropes, until they reached more open country, "where the trees were full of beautiful orchids in full bloom, and the western slope of the valley was covered with flowers."

New Year's Day was foggy and chilly, and proceeding down the valley (which abounded in game) the party reached the banks of a large stream running S.W. along the centre of a savannah from one to three miles broad. They were now on rich soil, the timber large and plentiful, especially cedar and mahogany; the country was of undulating character, from 1,800 to 2,300 feet high, but progress was slow, owing to their having to cut every foot of their way, except in spots where animal tracks rendered their progress less difficult. They were in fact on the top of a wooded plateau, which would form a fine agricultural farm.

On January 3rd they reached the top of another extensive plateau, whereon they alighted upon some Aztec ruins. Mr. Fowler so describes them: "A perfect wall, four feet high, measuring 66 feet by 45 feet, formed the principal ruin. The top of the wall was perfectly level, and only in a few places have the stones fallen away. The wall was about four feet thick; the stones were large, and all dovetailed, without vestige of mortar. Close to the main building were the remains of a circular building, and signs of other buildings were plentiful in the neighbourhood." Other Indian ruins were passed a day or two afterwards on a still loftier plateau, and the party reached a narrow ridge, the land on each side shelving into valleys and gullies.

"Hardly had our packs been deposited on the ground," writes Mr. Fowler in true sportsmanlike spirit, "when the cry of warree was raised, and two of the Indians who had guns, with myself, went after them. My dog soon gave tongue, when such a snapping and gnashing of teeth began, the like of which I fancy would only be heard in the lower regions. The Indians soon outpaced me, so looking out for a convenient spot with a tree at hand I took up a position at the head of a deep gully commanding both sides, and awaited what might turn up. I knew we were in the midst of a big drove of white-lipped peccary (called warree here), and when they pack and gnash their teeth they mean to fight and are dangerous, and the resort is to climb a tree out of their reach.

"One of the Indians fired away on my right, and shortly after I heard the whole drove making through the bush in my direction, and it was not long before I saw the brutes coming headlong down to the side of the hill straight to where I was standing. With two charges of buck shot I bowled over a warree right and left, within twenty yards, which staggered the rest for a moment and just gave me time to get up the tree to save my own bacon, but not before one of the warrees I shot brushed against my leg as it rolled down the hill. The hogs soon found me out and swarmed around the tree, gnashing their teeth in a most horrible manner. My gun was lying on the ground, where I had been obliged to leave it in my hurry to secure my retreat. In this plight the ridiculous thought flashed across me of how much of my life had been mixed up with pork, and the prospect of its being my end looked alarming. As a child I would never eat meat but bacon without a bribe. I was called 'pig' at school because I came from Hampshire. Reflecting on the scene underneath, it occurred to me to anticipate my evident destiny by dropping into the mouths of my friends below, and so be converted into my favourite meat. An end so inglorious as pork, however, deterred me from yielding to the temptation, and seeing that the warrees were restless and looking suspiciously in the direction they came from, I gave a view-halloo to warn what I thought might be one of the Indians coming my way, attracted by the shots I had fired; instead, a huge tiger or jaguar appeared on the scene, his face looking exactly like a rising full moon peeping through the foliage, which accounted for the uneasiness of the warrees, and I was glad to find their whole attention was not devoted to myself. The warrees now made with one accord a clean bolt of it, and I never witnessed a more helter-skelter scramble through the bush. My dog, answering my call, I also perceived at this stage, creeping stealthily through the bush with every hair on end and tail as stiff as a poker. She came out close on the right of the tiger and looked round for me, then at the beast. The jaguar turned his head towards her, made one step, and I thought it was all up with poor 'Chips,' who, to her credit, never flinched from her point. I slipped down the tree at once to get my gun to save my dog, but before I could get my cartridges in, the jaguar made off on a sudden after the warrees."

So far the country seemed divided into regular short belts or stratas. Four or five miles of good land would be crossed, succeeded by the same distance of lumpy, rugged ground, with little or no soil, and with hardly a single indication of any form of life, no vestige of creation in fact except ubiquitous humming birds. Is it not more than strange that straggling Indians, or even one solitary mahogany hunter, had apparently never visited this tract of country—a land literally flowing with milk and honey, beautiful in its wildness, and fairly defined into districts for pastoral, mineral, or agricultural pursuits, population being alone wanting to convert a desolate waste into luxuriant homesteads.

On a range of hills 3,100 feet high, which they reached on the 8th January, Mr. Fowler discovered a very large quartz reef which on examination proved to be full of iron pyrites, while other pieces on being analysed in Belize were pronounced to be auriferous. On the 10th they nearly lost their way, their stock of provisions, began to run short and the Indians shivering with cold, beset with flies and weary with work, began to talk of a return to their own country. Happily they did not desert their intrepid leader.—

> "The country we now passed through (writes Mr. Fowler) was full of sarsaparilla. We heard a river roaring through a valley on our left and passed many feeders to it. The country was wild and rugged, and we tried to breakfast on the side of a close ravine, but those tormenting *botlasses* drove us off. Climbing a high hill, carrying water with us for breakfast, for a few moments a magnificent scene burst on our view on reaching the top. The sun shone out for a few moments, but drifting clouds prevented the whole scene from being realised in one grand view. At our feet lay a broad valley some 1,500 feet below us, running away to the right. In front was a range of mountains level with the ones we were on, with valleys winding up the sides, and hills rising along the sweep of the slope opposite us; the foliage of the forest looked like an undulating greensward, bright—where the sun shone, but sombre underneath the clouds. There was a break in the mountains opposite, a little to the left of us, through which a large stream wended its way to the coast; to the left in the distance, was the head of the valley hemmed in by mountains, looking like a huge amphitheatre, with a large stream leaping over a precipice, forming a magnificent waterfall of 300 or 500 feet. Immediately to the north of us was another waterfall, which we could only hear discharging the waters of the stream we had been following, through a gorge into the valley below. We rested, and admired the scene, which was perhaps all the more beautiful and wild from the varying shades of light thrown across the picture. Thick and fleecy clouds were driven alternately across the valley and mountains by a high wind. The roaring of the waters around, amidst the silence of the woods, added another charm to the pleasing sensation we experienced."

Truly a poetic, and yet a vivid description. But, *mutatis mutandis,* does it not read like one, say, of our Lake District?

On the 15th January the party pushed on from the banks of Monkey River to Deep River, and across a pine ridge, and striking the northern branch at foot of some hills they cut their way through an extensive logwood bush over a country the formation of which discloses the presence of many minerals, until they reached Phillips' bank, where the mahogany cutters had just arrived from Belize after their Christmas holidays.

As regards the presence of gold, Mr. Fowler aptly and suggestively remarks that 1,756 ounces of gold dust were shipped from Belize in 1879 as a means of remittance by Belize merchants "in consequence of currency difficulties," by which he means the absence of local banks. But not only does gold exist in more or less quantity, there are also clear indications of coal and iron, as well as various precious stones, especially opals. It certainly seems reasonable to expect that sooner or later our Government will institute a thorough investigation into the geological formation of the colony, similar to the systematic surveys which have been carried out in Jamaica, Trinidad, and British Guiana.

The great staple industry under which the colony has thriven heretofore is, of course, mahogany; thus justifying the motto of the settlement, *Sub umbra floreo.* But the flora and economic productions which are indigenous to the soil, are of so varied a character as to require separate notice; and indeed they may be said to form the chief claim on the attention of those who desire to become acquainted with the resources of the colony.

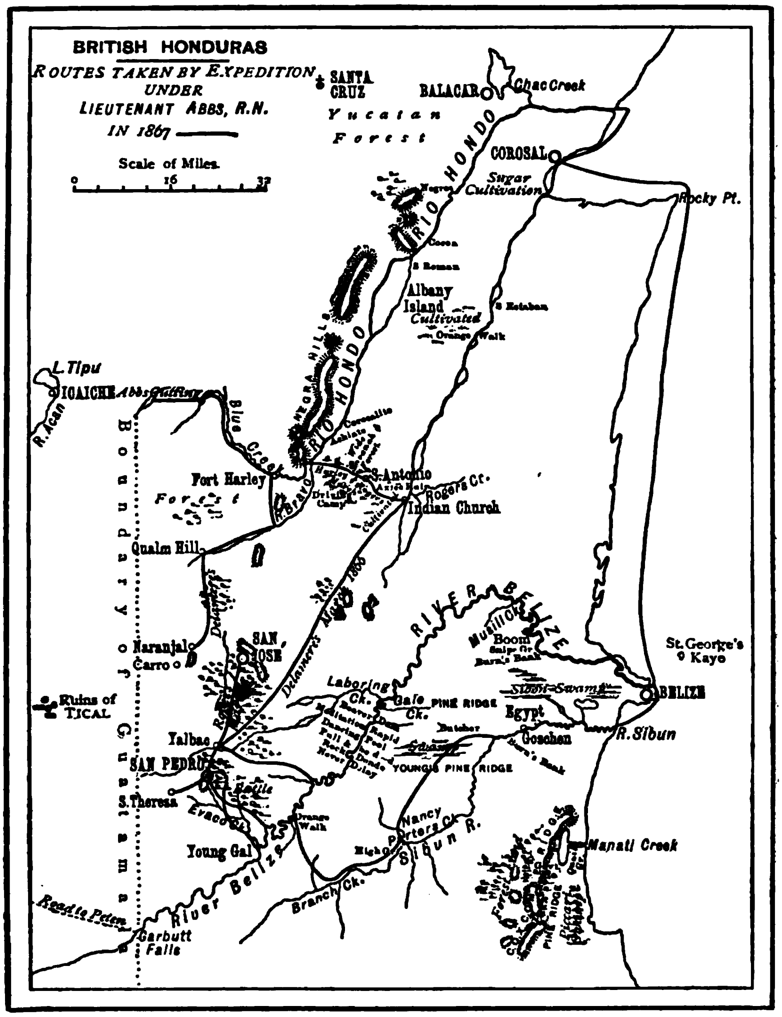
Happily for my purpose I am not dependent on reminiscence or unscientific notes, but upon the carefully prepared record of the researches made by Mr. D. Morris, Director of Public Gardens in Jamaica. In 1883, at the instance of Colonel Harley, then the enlightened and energetic governor of the colony, this gentleman was invited to Belize with a view to his reporting upon the natural soils and products of the interior.

"My object," says Mr. Morris in the preface to the little volume subsequently published, "has been to place in as clear and as impartial a manner as possible, the circumstances which at present obtain in the colony, and, starting from a consideration of its soil, climate, and vegetable productions, to indicate in what directions it is capable of being gradually developed and enriched." He goes on to say, "I believe the Government would do well to offer every facility for the establishment of permanent plantations in the colony and for attracting to it an intelligent race of planters, possessing the necessary capital and energy." Elsewhere, in the text, he remarks: "There are thousands of acres of magnificent land offered by government at an upset price of a dollar an acre, capable of growing nearly every tropical product. Some of these lands are either near the banks of the rivers or on the coast itself. There is an abundant market for bananas, plantains, cocoa-nuts, pine-apples and all tropical fruits, and regular direct communication with both England and the States." South of Belize, he tells us, lie extensive areas of rich alluvial soil, admirably adapted for the cultivation of sugar-cane. Further inland, coffee and cocoa plantations might occupy the slopes and glades of the undulating Cohoon ridges and the loftier sides of the Coxcomb mountain range, "while everywhere beyond, and—with permission from the Government of Guatemala—to an illimitable extent over our borders, the felling of trees and the breeding of cattle would be surely remunerative." Passing down the coast Mr. Morris landed at Mullins River, where two fruit companies have established themselves which pay 50 per cent on the paid-up capital. The soil being of a deep and free loamy character is, Mr. Morris thinks, exactly suitable for the cultivation of bananas and other nutritious fruit trees. The actual seaboard is eminently fitted for the growth of cocoa-nuts, owing to the fact that the force of the surf is expended on outer reefs and thus little sand is accumulated on the coast, which being low and rich in vegetable humus, affords excellent opportunities for the successful cultivation of cocoa-nuts. The usual value set upon these trees throughout the West Indies is £1 a year for each tree.

The next point of interest visited by Mr. Morris was All-pines, a village on the Settee River, where there are two large sugar estates thriving under the management of an experienced Demerara planter. Inland of the settlement a cohoon ridge occupies both sides of the river, indicating, in his opinion, "The richest land of the colony." Next Mr. Morris visited the Seven Hills sugar estate, lower down the coast, and found it occupying rich sheltered glades and valleys, and "surrounded by low wooded hills, composed of a finely laminated compact limestone." The last settlement in our territory is occupied by some fourteen American families, who have placed about 600 acres under sugar-cane. The result is suggestive, for it proves the salubrious nature of the climate where these white settlers could, by their own exertions, turn a wild tropical forest into a number of rich and prosperous homesteads. "This district," adds Mr. Morris, "is admirably adapted to other and equally productive industries, such as cacao, nutmegs, oranges, and other fruit trees; ginger, sarsaparilla, arrowroot, vanilla, ground-nuts, &c."

A Government road leads from the Toledo settlement, as it is called, to the Carib village of Ponta Gorda, described by Mr. Stevens in glowing terms, as realising his ideas of tropical grandeur and beauty. "Dense forest to the water's edge, beyond being lofty mountains covered to their tops with perpetual green, some isolated, and others running off in ranges, higher and higher till they are lost in the clouds."

On his return to Belize, Mr. Morris set his face towards the central and western districts by a new road or rough track, which has been cut along the course of the river to Orange Walk, and thence to a frontier village called Cayo. The Sibun-swamp had been bridged, and having traversed Young's Ridge (an excellent snipe ground, where I have myself bagged 70 brace in one day), he reached Gale Creek. The Cohoon Ridge, over which they passed next day, was found to be full of orchids and aroids hanging in festoons from trees—a perfect garden of parasitic vegetation—and the indications of the soil were all that could be desired for most cultivations of a tropical character. This district is full of game, and I do not know a spot on earth where a more varied bag can be made—snipe, teal, pigeons, egrets, toucans, parrots, eagles, quails, and wild turkeys: deer, jaguars, pumas, and peccary, besides tapirs, squirrels, monkeys, and alligators. Beyond Orange Walk, Mr. Morris explored the upper portions of the river, along the banks of which were dotted numerous mahogany works, each having so many miles of frontage and reaching far into the backwoods. The road went through Tiger-run, a mahogany work in a magnificent district where there were fine india-rubber trees and pimento, "the latter," says Mr. Morris, "being a tall tree, finer than I had



COPY OF LT. ABBS' STAFF MAP OF BRITISH HONDURAS FROM ACTUAL SURVEY.

ever seen before; the woods also were fragrant with the ripe bursting pods of vanilla which hung in festoons from the trunks of Santa Maria and other rough-barked trees." At the Cayo, which is the *ultima thule* of the colony, is the experimental coffee plantation before referred to, and Mr. Morris considers the yield of two or three hundredweight per acre for a first crop, highly encouraging. As regards mineral wealth Mr. Morris remarks "The most promising mineral district is evidently a belt of country 20 or 30 miles broad running north-east and south-west from the Coxcomb range, parallel to and distant from the coast as the crow flies about 25 miles." The opal mines of the neighbouring republics are famous—why should they not be found in Honduras? As a matter of fact Mr. Morris adds, "I have in my possession fine specimens of jasper and other stones picked up in the rivers of the colony, and I have no doubt, if the sources of these rivers were systematically explored, much valuable information would be obtained."

Taking all the foregoing into consideration, it would seem that Mr. Gibbs is fully warranted in his eulogistic summary of the capabilities and prospects of the colony. "The generality of Englishmen," he remarks, "when the word Honduras is mentioned, allow their ideas to revert to Spanish Honduras bonds and the railway fiasco perpetrated in that enterprising republic. But although its boundaries are limited, its situation geographically with ready access to the markets of the States, its topographical features and contour, its safe anchorages and convenient harbours and riverain facilities, its agricultural capabilities, its undeveloped mineral resources, its immunity from pestilence and from the convulsions of nature, point out British Honduras as by no means the least important, while its unique history renders it not the least interesting of our colonial appendages."

After quoting this eloquent passage it may seem an anti-climax, but I cannot refrain from adding my meed of encouragement by saying in conclusion that whether we consider the intelligent observations of an official like Mr. Fowler, or ponder over its past history, as collated by Mr. Gibbs, or study the records of Mr. Morris's botanical researches, it will be apparent that in the colony of British Honduras we possess an accessible, naturally rich, and improvable property, capable of sustaining and enriching thrice or even ten times its present population, and which, with judicious management and philanthropic supervision, is destined to overide all preconceived ideas of tropical colonisation, and prove itself not only a garden of remunerative produce but an appanage of the Crown at once socially, politically, strategically, archæologically, ethnologically, and geographically interesting and useful. In one word British Honduras is the key of the position.

APPENDIX—THE SANTA CRUZ INDIANS.

So far back as 1849, a war of extermination and savage ferocity was carried on in Yucatan. Whenever detached bodies of Spaniards were entrapped, the infuriated Indians mercilessly tortured them to death. Bacalar, a town not far from the banks of the Hondo, was taken and retaken several times by the belligerents and its inhabitants alternately massacred. On one of these occasions, when the Indians were victorious, a British officer was sent from Belize to expostulate with the Indian chief, and intercede on behalf of his Spanish prisoners; but it was all to no good. Major Anderson thus described the scene of which he was the unwilling spectator:—

> "The prisoners were stripped, bound by bush-rope to separate trees, and literally hewed to pieces with macheats. It being a festival, most of the Indians were so incapable from the effects of drink that the blows fell sometimes without sufficient force to amputate a limb, or penetrate a vital spot; so the task of butchery was transferred to boys and girls, who amused themselves for hours by chopping the faces and bodies of the shrieking Spaniards. Happily for himself, the Spanish Commandant was handed over to the tender mercies of these innocents, who, while hacking their victim, by mistake, cut the ropes that bound him, and finding himself free, he effected his escape to Corosal, where, cured of his wounds, he still lives to tell the tale and harrow the hearts of his sympathising auditors."

The Mexican Government, at Merida, now fitted out a more formidable force of 3,000 men, under General Castille, for the purpose of attacking the stronghold of the Indians at Santa Cruz; but the latter, elated with success, prepared the customary war drink, and awaited their foes in a narrow pass, skirted by dense brushwood. Here, frantic with drink, they fell upon the unfortunate Spaniards, who, wearied by the five days' march from Merida, made but slight resistance, and were destroyed almost to a man. Castille himself was taken prisoner, and would have been tortured to death, but ascertaining him to be a musician, they reserved him for the still more ignominious fate of soothing the angry moments of their chief, the renowned King Puc. The revolt against Spanish authority being now thoroughly successful, King Puc turned his attention to the Spanish halfbreeds who had crossed into our territory for protection. Constant attacks were made on their settlements, and the alarm of invasion spread to Belize, whereupon the acting Superintendent, Captain Price, resolved on demanding redress and cautioning the Indians against any future landing of armed parties on British territory. Lieut. (now Colonel) Twigg, R.E., and Lieut. Plumridge, 3rd West Indian Regiment, since deceased, were accordingly sent to Santa Cruz with a despatch setting forth these demands, and departed on the 16th of March, 1861. As I was myself in Belize at the time of the mission of these officers, and as my information was derived from themselves, I can vouch for the accuracy of the account in every detail. Their course lay, in the first instance, to Bacalar, which they reached by entering Chac Creek, off the Hondo. They found it to be a narrow stream, winding through a dense forest of mangroves, whose foliage arching over darkened the passage. From this they suddenly emerged into the wide expanse of the lake of Bacalar, along the western shore of which, in the distance, the white walls of the town were conspicuous. On being permitted by the Indian commandant of the outpost to land, they recognised a British trader among the assembled Indians, and engaged his services to accompany them to Santa Cruz as interpreter.

The streets of Bacalar seemed to have been built with considerable regularity; the houses, only one story, having an Eastern aspect, the roofs flat and surrounded with a low parapet. But they were doorless and windowless, the Indians having removed these fixtures to adorn their newly-built city of the Sacred Cross. The cathedral, although in ruins, had evidently been a costly and stately building—the desolation was complete, for now lime and guavo trees were found sprouting from the floors of the grand aisle and transept.

At daylight on the following morning the commissioners proceeded up the lake, of the extent of which they could form no accurate idea, as night had closed before they reached the northern extremity, and they were almost despairing of reaching the rancho at which they had been directed to land when a bright beacon burst on their sight far in advance. For this they steered, and soon perceived that it was caused by the burning of dry palm leaves fastened in a bunch to the top of a high tree. Not without some misgiving did they run their boat ashore under the overshadowing mangroves, for there, around a fire, sat or reclined in hammocks, slung from tree to tree, a party of naked savages. On hearing the cracking of the foliage the Indians sprang to their feet, each seizing his loaded firelock, but recognising the voice of the interpreter, they quietly resumed their former positions without taking the slightest notice of their intruders' presence. The Indians had, however, been directed to meet the commissioners at this point, and to accompany them as a guard to Santa Cruz. Next morning five mules were found picketed to trees, which were intended for the service of the officers and their party. They mounted without a word, and proceeded on their journey followed by the armed escort.

Their path lay through dense jungle, which totally excluded views of the surrounding country. Towards evening they suddenly emerged into an open space, where the blackened ruins of a few houses stood in front, on the margin of an extensive lagoon. Here they slung their hammocks between the charred posts of the rancho and bivouacked for the night. At daylight they resumed their journey, which was without incident throughout the day, and at night reached a small town called Repente. The following evening they arrived at the village of Santa Clara, where, although a religious festival was going on, they were lodged in the chapel by the commandant, the rites being performed without interruption. Early on the morning of the fifth day the commissioners arrived within a mile or two of the notorious stronghold, and here they were ordered to halt. They might have imagined themselves in the valley of the shadow of death, for all around lay the whitening bones of the ill-fated Spanish army, as well as broken muskets and the tattered remnants of a once bright uniform—dismal evidences of the butchery four years previously.

In the distance was heard the ringing of bells and sounding of bugles, and after a considerable time a guard of honour marched up and halted in front of the commissioners, cocking their muskets and presenting the muzzles at the officers' breasts; in which unpleasant predicament a parley was commenced. The officers informed the commander of the guard that they desired an interview with "the Patron," to explain the contents of the letter from Capt. Price, already forwarded from Bacalar—whereupon the guard encircled them, and, muskets still at the present, they were marched into the city. As the party passed through the streets great excitement prevailed, and crowds of Indians came forward to gape at the white strangers, yelling savagely or flourishing their macheats. On arriving at the Plaza, in front of a church-like building, the officers were taken into an open shed and ushered into the presence of King Puc himself, who reclined in his hammock surrounded by his chiefs. They at once explained the nature of their mission and asked His Majesty for a written reply to Capt. Price's despatch. Puc, however, did not appear to recognise their presence, as he did not condescend to open his lips. The commissioners having waited patiently, at length remarked that they had but a short time to remain, and requested an immediate answer. Without raising his head, Puc addressed the interpreter to the effect that he could not give an answer just then: that the officers must wait till "god came." He then ordered them out of his presence and they were conducted to a shed, where they were disarmed and placed in the custody of an armed party. Nothing was offered them to eat or drink throughout the day, and at night, weary and exhausted, sleep alone relieved them from the miseries of their situation. From this, however, they were soon aroused by the firing of muskets and beating of drums, and a number of savages rushed into their place of confinement and ordered them, through the interpreter, to come at once to the church, as "god" was calling for the "white officers."

It was now about one a.m., the favourite hour among the Indians for the execution of their prisoners. The summons was, therefore, to say the least, discouraging. With difficulty the guard forced a way through the dense throng of fanatic Indians, who with waving torches pressed round the building to listen to the voice of their "god." It may be well to explain at once the nature and attributes of this speaking deity. It appears that some of the chiefs became at one time obnoxious to the tribe; and to restore their power, one of their number, who was a ventriloquist, devised a scheme to work on the superstitious fancies of the savages under their control. Having taken oaths of secrecy, they set up a wooden crucifix with a wide slit in the cross-beam whence the ventriloquist could make his voice appear to issue, the others feigning great respect and awe The Indians were completely deceived by this simple artifice, and upon the cross telling them to honour and obey their chiefs they yielded implicitly to their mandates. The chiefs next invented rites and instituted offerings to the cross, and threw such an air of mystery around the ceremonial, that even educated minds might have been affected, but with the Indians, so strongly had this mockery possessed their weak intellects, that murder itself would gladly have been committed if ordered by the cross. All matters were referred to this oracle and its word was decisive.

When Major Anderson visited Bacalar, as recorded, the cross was then in that city, and so also was Bernicio Puc. In 1860, when another officer attempted a mission to the Indians, Puc had removed the cross (which was now constructed of pure gold) to his head-quarters of Santa Cruz. The answer to our remonstrance on that occasion was not received for several months, and the reason of the delay was ascertained by a spy sent from Belize to be as follows:—The cross, when consulted, advised an apology to be sent to the British Government for the outrage committed by their troops. Accordingly a letter was written, which the oracle directed was to be signed by Puc and three of his chiefs; one of them temporised, and finally refused to sign the document, whereupon the cross ordered the recusant minister to receive 50 *palos* or lashes, which were at once administered. However the apology, such as it was, arrived too late, for with it came the news of another inroad on our territory, which induced the Superintendent to send up the officers, whom we left in the awkward predicament stated.

The church or temple to which they were now hurried was built for the reception of the cross, and consisted of a high central building with an arched roof, with low flat-roofed wings supported by a series of arches and stone pillars. The massive walls showed no attempts at architectural ornament, and the arches in the wings were simply closed by suspended mats, which were now partially drawn aside to admit the commissioners and their interpreter into the interior of a dark corridor crowded with Indians. After some delay they were taken by the hand and led to an interior entrance of the same description, by which they were ushered into a spacious and lofty aisle, utterly dark. Here again their invisible guide led them by hand over the prostrate forms of such favoured Indians as were admitted into the presence of God. Then they were ordered to kneel down. A soft chanting music which had hitherto pervaded the building now ceased, and was succeeded by a rumbling noise like distant thunder. This also ceased, and amid the deep silence that ensued a still small voice was heard, as it were, in mid-air, speaking in the Maya dialect. It asked who the officers were and for what had they come? Then followed a series of questions, some of which taking a dangerous tendency, the interpreter answered falsely, as he confessed afterwards, to save his own life and those of the commissioners. What promises were made on their behalf the latter did not know at the time, but they subsequently ascertained that their lives had been ransomed by the promise of 1,000 barrels of gunpowder. At all events, they were allowed to pass out of the building unmolested, and it may be mentioned with regard to this awful tribunal, that had the cross passed sentence of death, the victims would then and there have been seized by the fanatics and hewn to pieces in the dark. It is only in cases where there are great numbers to be slain that prisoners are publicly executed.

The following morning a substantial meal was sent to the famished commissioners from the royal table, and King Puc followed himself, in state, to call upon them. It was but eight a.m., and his majesty had not yet recovered from the night's debauch. He then gave them leave to roam about the town. He himself, setting the example, proceeded to parade the streets surrounded by a guard, and followed by an Indian Ganymede, who carried a bottle of aniseed and a calabash as a drinking vessel. He frequently stopped to take a draught of this intoxicating spirit, until finally he sank to the ground incapable, his guard the while standing around their prostrate chief, unmoved by the exhibition, and remaining so until His Majesty was pleased to rouse up, when they followed him as before.

Puc remained in this state of intoxication for four days, during which period the officers anxiously awaited a sober moment to obtain his sanction to leave Santa Cruz. Unfortunately he had told them to remain till "God spake again." Now they had learned that God never spoke while Puc was drunk· Puc and the cross were in fact inseparable, the inference may be easily guessed. Moreover, on the principle of the adage, "in Rome one must act like the Romans," the unfortunate commissioners were compelled to dance, sing, drink, and act in every way required by the inebriated king and his chiefs during their rather protracted debauch; and I must now draw a veil over other degrading familiarities to which, by their sorrowful confession, they were subjected.

On the evening of the fourth day news that the King was asleep in the church reached the delighted commissioners. Puc, like the patriarchs of old being priest as well as king, availed himself of the title to occupy the church as his abode. Accordingly they visited him there and obtained his leave to go. This they did without waiting for the sanction of the cross, or even the answer to the Governor's despatch, to obtain which their lives had been so seriously imperilled. No time was lost in the return journey, as may well be imagined, and travelling night and day, they reached Belize on the 12th April. It had become evident that a demonstration in force should be made to assert the dignity of the British Government, the Indians being under the impression that the small garrison of Belize and Corosal represented the whole British army, a notion very generally fatal to our interests in savage countries. His Excellency the Superintendent not having sufficient troops available at Belize for the object in view, had, previous to the officers' return, represented the unsafe condition of the colony tò the Governor-General in Jamaica, who, in anticipation of hostilities, had at once despatched H.M.S. Spiteful, with 300 men of the 2nd West India Regiment, who were immediately concentrated on the frontier. Meanwhile, on the 14th April, thirty armed Indians,who had evidently pursued the commissioners, crossed the Hondo and assaulted a village, called St. Helena, a few miles from Corosal. The villagers fled in wild confusion towards the latter place, first firing the signal gun agreed upon to warn the inhabitants of the approach of their dreaded enemy. The news spread like wildfire through Corosal, and a panic followed, simply indescribable. Some, taking advantage of the confusion, ransacked the deserted houses; others rushed headlong into the river; and many were drowned in their frantic efforts, by boat and raft, to reach the opposite shore. The presence of the troops did little or nothing to reassure the cowardly half-caste Spaniards, who even forgot all ties of relationship, and left their distracted wives and children to effect their own escape.

The agonizing cries of children, and the shrieks of women as they rushed pell-mell along the dark streets, imploring protection, together with the incessant firing of small arms, produced a scene never to be forgotten. Happily for these terrified and defenceless creatures, the Governor and officer in command of the troops arrived from Belize in the morning, and their prompt and vigorous measures at once allayed the panic. Martial law was proclaimed, and the male inhabitants, without reference to rank or station, were told off into working parties, under Lieutenant Twigge, Royal Engineers. The bush around the village was cleared, barricades were erected at suitable points, and guns were mounted to command the main approaches. Next, volunteer corps were formed, and arms and ammunition served out to them, and finally reinforcements were demanded from Jamaica. No doubt these wise precautions checked any attack on the part of the Indians if such were intended at the time. At all events, they staved off the evil day. But it would have been better for the interests of the colony, if then and there indemnity had been exacted at the point of the sword, and if advancing in force, on the very stronghold of King Puc himself, from the temple which enshrined the god of their idolatry, we had dictated terms of future submission.

CORRESPONDING MEMBERS' LETTERS.

The REV. CHAUNCY MAPLES, *Corresponding Member of the Society.*

Lindi, July 27th.

My dear Mr. Sowerbutts,—I have to thank you for your letter of May 22nd, and to ask you to convey to the Council of the Manchester Geographical Society my thanks for the favour conferred by them in electing me a corresponding member. My return to my duties in this part of the world having been so recent an occurrence I have had no time to prosecute any long journeys which might have been productive of matters of interest to the Society. I have, however, paid one visit to the district where the garnetiferous rocks abound, and have again collected a fair number of specimens, both of garnet and beryl. The specimens are not such as would prove of any value, or be worth placing in jewellers' hands; but, no doubt, they indicate a *possible* source of wealth to any one who might make it his business to search thoroughly where I have merely skimmed the surface. I lay stress on the word *possible*, for I do not consider myself a competent judge as to what the district might be expected to yield in the way of valuable gems. You will notice from my address that I am at the coast at present, having journeyed hither *en route* for Zanzibar, at which place I have some missionary business to transact. I propose, however, returning to Newala immediately. Two days' journey from here, last Friday, I fell in with a large caravan, with many—perhaps three hundred—slaves from Nyassa; there are also two other caravans encamped about seven miles from this town, as I write. I hear that in these caravans also there is much black ivory as well as white, though the latter is all that is talked about in the town itself. We are now in a state of much anxiety as to what will be the issue of the impending quarrel between Zanzibar and Germany. I should grieve sorely if the country eventually falls into the hands of the German government. You speak of having posted to me a copy of the first number of your journal. I am sorry to say it has not yet reached me; perhaps it was insufficiently stamped, as this has been the cause of my having lost many pamphlets sent to me from England. I am thankful to say I am very well, and hope to be able to stay in Africa for a good long spell. With kind regards and thanks, I am, yours very truly,

CHAUNCY MAPLES.

Universities Mission in Central Africa, Newala, E. Africa, Nov. 7th, 1885.

Dear Mr. Sowerbutts,—I received your kind letter announcing that Mr. H. E. Sowerbutts, J.P., had sent me, for our natives, a piece of Manchester sheeting, about three weeks ago, and must now thank you for the same. I think I wrote to you from Zanzibar in the month of August, or perhaps it was after I returned here in September. It does not fall to my lot now to travel about much, as I have so much to do at this station, but our Bishop (Bishop Smythies) has lately made an interesting journey, an account of which he has sent to Mr. Penney, our Secretary, at 14, Delahay Street, who doubtless will have it printed, so that if you apply to him, mentioning my name, he would be very happy to furnish you with a copy of this narrative. The journey I allude to was made from Matope, near Blantyre, to this place—a distance of between four and five hundred miles, and it occupied a comparatively short time, for Matope was left on September 10th, and Newala reached on October 24th. The route taken was from Matope *viâ* Kavinga's to the north-west shores of lake Shilwa, then along the "wooded ridge" noted by Consul O'Neil, skirting the northern shores of the same lake until Chinta was reached. Still following an almost due northerly path, Napulu's village, on the eastern shores of Lake Amaramba, was the next place of importance at which the Bishop's party arrived. From this point an entirely new course was struck and an hitherto untrodden one, I believe, by any European, for instead of crossing the Lujenda and following its western banks, the Bishop's guides struck out to the north-east, and the river was soon lost sight of to the west. Then six days of travelling were made through uninhabited forest land, the various features of which, as well as the rocks and hills which were passed, are all duly noted in the Bishop's letter. On the seventh day the well-known chief Mtarika, who lives on an island in the Lujenda, received the caravan and gave the Bishop a very friendly welcome. After a stay of two days with the hospitable Mtarika, the Bishop and his followers again pursued their journey, keeping the Lujenda on their left hand, though they seldom saw the river itself, owing to the thick foliage and "greenery" that line its banks. They marched on much in the same direction as the river flows until they came to Lipumbula Mountain and Naintusi's, with which places Mr. Thompson and others have made us familiar. Then, at last, they came to the confluence of the river Rovuma—with the river they had been, so to speak, following from its very source; and shortly after passing the junction of these mighty African streams they crossed the Rovuma, and on the 24th of October arrived safe and well here at Newala. The chief interest attaching to this journey, from a geographical point of view, is to be found in the fact I have already mentioned, namely, that the Bishop may claim to be the first European who has followed the Lujenda from its source to its junction with the Rovuma. Mr. Johnson, my colleague, had indeed reached Amaramba from Mtarika, following its western bank, but in point of importance this journey of the Bishop's far exceeds that earlier walk. I ought to mention a curious fact that struck the Bishop with reference to the volume of water in the Lujenda. He noticed that when the water flowed over sand, near the confluence with the Rovuma, the volume of water was far less than what he had noticed higher up the stream. It appeared to him that this was due to evaporation. There being no foliage near the stream in the part where the volume of water decreased, the sun's rays had their full power, and possibly caused evaporation rapid enough to account for the remarkable diminution—possibly, though, the water may have been absorbed by the sand.

Mr. Last has just arrived here in charge of a new expedition organised by the R.G.S., for the purpose of following up Consul O'Neil's explorations and visiting Meto, Namuli, etc. He will only be with us two or three days, after which he will proceed to Ngomano in order to take observations and settle the true position of the confluence of the above-named rivers. Mr. Last actually arrived as I was writing the first part of this letter. He has a party of between 40 and 50 men with him, and a very compact equipment. I wish he was able to make a longer stay here, but he is anxious to get on to the south before the rains begin.

I do not think I have anything more of interest to communicate at present, and will therefore conclude this letter with the hope that the Society continues to flourish and increase in numbers and importance, as I am sure indeed that it will do.—Ever yours very sincerely,
CHAUNCY MAPLES.

MR. ANTON GRESHOFF.

Boma, 4th of June, 1885.

Dear Sir,—I had the honour to receive your letter of the 30th of March, and beg you to thank the Society for the honour bestowed on me by selecting me as a corresponding member. I will be most happy to write to you from time to time about the Congo, and hope that you will send me the paper published by the Society. Address: A. Greshoff, Boma, Congo River.—I beg to remain, with the greatest respect, yours faithfully,
A. GRESHOFF.

The Secretary, Manchester Geographical Society.

SENOR F. S. PLANT.

Ymamaylan, Isla de Negros, Las Filipinas, 10th June, 1885.

Dear Sir,—Your communication of April 14th, informing me of my election as a member of the above Society, has been received with the greatest satisfaction; and I beg that you will convey to the Council my best thanks for the honour they have done me by placing my name on the list of members. I shall be very pleased to send information occasionally about these very imperfectly explored and almost unknown islands, as my residence, business, and daily experiences are in the heart of the Archipelago, giving me the most favourable opportunities of obtaining reliable information. I shall always take the greatest interest in the doings of the Society, and trust it may be prosperous.—I beg to remain, dear sir, most respectfully yours,
FRANCISCO SHEPPARD PLANT.

The Secretary, Manchester Geographical Society.

CORRESPONDING SOCIETIES.

The Lisbon Geographical Society, August 15th, 1885.

Sir,—The nature of their work and the state of their health prevent our explorers, MM. Hermenegilde, Capello, and Robert Ivens, from giving, at so early a moment, a detailed statement of the journey which they have just completed from Mossamedes (Angola) to Quilimane (Mozambique). These gentlemen should by this time have reached Loanda and will not be back in Lisbon before September next. I can, therefore, but give you a rough sketch of this exploration, which, on account of the scientific capacity of our illustrious officers, and of the extended and interesting zone which they have studied, may already be considered really important from a geographical and economical point of view.

As you may know, this zone, which may be said to be limited by parallels, 10° and 17° south latitude, contains several of the principal hydrographical problems of Central Africa, independent of such as concern African ethnography, climatology, flora, and fauna.

Our explorers left Lisbon in the beginning of the year 1884, provided with all necessary instruments of observation, intending to continue the exploration and chart survey of our province of Angola, and to follow up the studies so brilliantly opened in their preceding expedition from Benguela to the country of Yacca in the region of the Quango.

They left Mossamedes in March, 1884, with a small following, rapidly organised, and accompanied only by a feeble escort, partly drawn from the garrison of the province. They at once began to study the regions of the Coroca and the zone situated between the coast and the plateau of our post of Huilla.

From there they pushed on by SS.E. on the Humbe, and later by N., along the Cunène. This district they made the subject of a series of observations, which, inserted in the map, will give the general topography of the country this side Cunène.

Later on they supplemented these observations by others made up to the Cubango.

There are important corrections to be made in existing African maps with reference to this portion of our province, with special reference to the regions of the Higher Cubango and the district of Handa.

After crossing the last-mentioned river, they advanced along its banks up to 16° 20′ latitude.

The Portuguese expedition then came to an almost desert country, exceedingly marshy and broken up by numerous watercourses.

Back to the north, the explorers, starting with Lobala country, penetrated the region situated between the Cubango and the Higher Zambezi, which latter they met at Libonta.

Lobala country, which the Portuguese first explored in 1795, is composed of long inundated plains, which it cost the expedition untold hardships and difficulties to cross. Two months after entering this country they found the Zambezi and the commercial route forming the communication between the interior and the Bihé.

Our explorers then set about discovering the connection between the hydrographical basins of the Zairé (Congo) and the Zambezi, visiting the principal commercial centres in the regions of these basins, and studying the best means of communication between the two coasts.

With this purpose they left Libonta, crossed the Zambezi, and continued their march along the left bank of this river for six days, when they found an important tributary flowing from N.E., named the Cubompo. During the journey from Libonta to within the neighbourhood of Lake Moero, the expedition suffered considerable loss in men, animals, and instruments, the entire region up to Garanganja, the great Central African market, being quite desert.

However, our explorers were to study the sources of the Lualaba, and connect, by intimate observation, the two basins of the Congo (*sic*) and the Zambezi.

From Garanganja the expedition returned to the south; then, making eastward, went in search of the Luapula through immense deserted forests, which lie south of the Luapula.

Feeble and worn out with fatigue the expedition then descended to the Zambezi, which they followed to our district of Tete, and from there on to Quilimane.

The length covered by the expedition is 4,500 geographical miles, of which 1,500 may be considered as unexplored before.

At Tete the explorers were received with enthusiasm by the inhabitants, with the governor of the district at their head—this gentleman being (like Messrs. Capello and Ivens) a member of the Lisbon Geographical Society.

Although this information be superficial and incomplete, it shows, nevertheless the importance of the expedition, and I may already affirm that the observations made by Messrs. Capello and Ivens will entirely revolutionise the cartography of the zone traversed, and this especially in the hydrographical section.

The journey here treated is the fourth, at least, made by Portuguese explorers since the end of the last century. In these we do not include several others which have been tried,* which, although not equal to first rank, still have contributed towards the general knowledge of Central Africa.

In the midst of the extraordinary mystification which certain propagandist interests have circulated against Portugal, it is very agreeable to us to be able to prove in this manner, to all sincerly interested in the study and civilisation of the black continent, that we have not abjured our honourable and glorious traditions of leaders in this cause.

Knowing to what extent you are interested therein, I hasten to communicate this news to you in the name of the Geographical Society of Lisbon.

Luciano Cordier, Permanent Secretary.

The Secretary of the Manchester Geographical Society.

Geographical Institute of Norway,
Christiania, 26th November, 1885.

We have received your communication of 24th February with reference to the founding of a Geographical Society in Manchester.

Desirous as we are of establishing relationship with your honoured Society, suggesting the mutual exchange of publications edited by your Society and by the Geographical Institute of Norway, I have the honour of forwarding you this day a parcel containing all that has, up to the present date, been published by the said institute.

A similar parcel will be sent in future at the end of every two years, containing all that may have appeared during the intervening space of time. Assuring you of the pleasure with which the Institute will receive any and all your publications, I tender you my most appreciative esteem.

Thos. Bang, Colonel D'Etat-Major.

The Secretary of the Manchester Geographical Society.

[The very handsome present of maps and books referred to in the above communication has been received, and particulars will be given in the next Journal.]

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* Such as the efforts of Graça to the Muatayanvo by Bihé, of Lacerda to the Casembe, of Gamitto, of Porto, &c., (L.C.).

ADDITIONS TO THE LIBRARY.

JULY TO SEPTEMBER, 1885.

GEOGRAPHICAL EDUCATION.

Report to the Council of the Royal Geographical Society. By J. Scott-Keltie. 1885. J. Murray, London. Presented by the Royal Geographical Society. Six copies.

The New Code, 1885-86, of Minutes of the Education Department, with the Revised Instructions to Inspectors. 1885.

Instructions for the Government of the Prussian Schools, with the System of Study. Berlin, 1883. Presented by the Prussian Government.

Presented by Messrs. G. Philip and Son, London and Liverpool—

- Classbook of Modern Geography. By W. Hughes, F.R.G.S. Edited by J. F. Williams, F.R.G.S. A new edition. 1885. 380 pp., 3s. 6d.
- Philip's Geographical Readers. Illustrated with a large number of woodcuts and maps.
  - No. 1, 128 pp., 9d. First Steps. Part 1.
  - No. 2, 160 pp., 10d. First Steps. Part 2.
  - No. 3, 192 pp., 1s. England and Wales, Physical and Political.
  - No. 4, 256 pp., 1s. 6d. British Isles, British North America and Australasia.
  - No. 5, 281 pp., 1s. 9d. Europe, Physical and Political, and Appendix.
  - No. 6, 320 pp., 2s. The World, Interchange of Productions.
- Philip's Standard Atlases. Edited by J. F. Williams, F.R.G.S. With coloured maps.
  - No. 1, 12 Maps, 3d. England and Wales.
  - No. 2, 44 Maps, 4d. British Isles and Colonies.
  - No. 3, 35 Maps, 4d. Europe.
  - No. 4, 34 Maps, 4d. The World.
- Philip's Grammar School Atlas. With coloured maps.
  - No. 3, 25 Maps. . The World.
- Philip's Standard Map Drawing Books.
  - No. 1, Outlines. . England.

Gill's Oxford and Cambridge Geography. Revised edition. 1884. With sketch maps, 176 pp., 1s. Gill and Son, London. Purchased.

The Owens College Manchester Department of the Evening Classes, Sessions 1885-6. Prospectus and Syllabus of Lectures. 6d. Presented by Principal Greenwood. Two copies.

Report of the Yorkshire Union of Mechanics' Institutes, 1885. Presented by Mr. F. Curzon.

Report of the Union of Lancashire and Cheshire Institutes, 1882-3, 1883-4. Presented by Mr. W. Gee.

Manchester School Board Class List, Winter Session, 1885-6. Presented by Mr. F. O. Ruspini.

How I Teach Geography. By A. Park, F.R.G.S., F.E.I.S. 1883. Joseph Hughes, London. Presented by Mr. A. Park. Nine copies.

Our Colonies and India: How we got them and why we keep them. 1885. Cyril Ransome, M.A. Oxon. Cassell and Co., London. Presented by Rev. Canon Brown, M.A.

The Manchester Market and Journal of Commerce. The Golden Road to South Western China. By R. K. Douglas, M.R.A.S. 300 copies. Presented by the Proprietors.

Messrs. Philip and Son have presented to the Society a very interesting collection of English and Foreign Catalogues of Maps and Geographical Appliances.

BLUEBOOKS AND CONSULAR REPORTS.

Reports of Her Majesty's Diplomatic and Consular Officers Abroad on Subjects of Commercial and General Interest :—

Part 8 (No. 41), 1883—

Brazil—Yellow Fever.
Egypt—Irrigation of Lower Egypt.
Germany—Purchase by the State of Railways in Prussia.
Italy—Land Tax, &c.
Portugal—Artificial Harbour at Leixoes.
Russia—Effect of the Abolition of the Caucasus Transit Trade.
Sweden and Norway—Co-operative Movement in Sweden.
Turkey—Trade Route from Trebizond to Persia. With map of route and sections.
United States—Coinage and Circulation of Trade Dollars.
——— Immigration into the United States.

Part 1 (No. 2), 1884—

Belgium—Bronze Casting, its History and Method. With illustrations.
Borneo—Rivers. With map.
Germany—System and Working of the Schultze-Delitzsche Registered Credit Associations (People's Banks).
Greece—Greek Budget.
Russia—Pontiloff Canal. With map.
Turkey—Trade Route from Kerassana (Black Sea) to Karchissar. With map.
——— Trade Route from Ordos (Black Sea) to Sivas. With map.
Venezuela—Mines.

Part 4 (No. 38), 1884—

Colombia—Panama Railways, &c.
Germany—Wages in Machine Factories.
Turkey—Caravan Route—Erzeroom to Bayazid.
United States—Consumption of Tin in United States.
——— Pennsylvania Railway. With map.
Venezuela—Gold Mines. With map.
Zululand—(C 3864) February, 1884. Further Correspondence.
United States—No. 1, 1884. Further Correspondence respecting the Clayton-Bulmer Treaty and the Projected Panama Canal.
China—No. 2, 1884. Report by Mr. Hosie on a Journey through the Provinces of Ssu-Ch'nam, Yünnan, and Kuei-Chou. Feb. 11th to June 14th, 1883. With lists of words and Itinerary.
Africa—No. 2, 1884. Correspondence relating to Negotiations between the Governments of Great Britain and Portugal for Conclusion of the Congo Treaty, 1882-4. With chart of Lower Congo.
——— No. 4, 1884. Despatches from Her Majesty's Consul at Loando, 1881, 1882, 1883.
Presented by Mr. John Slagg, M.P.

Justus Perthes in Gotha, 1785-1885. A History of the Eminent Firm of Geographical Publishers, with numerous portraits. Presented by the firm of Justus Perthes, of Gotha.

La Question du Congo depuis son origine jusqu'aujourd'hui, par J. du Fief, Secretaire Générale de la Société Royale Belge de Geographie, 1885. With map of Congo Free State. Presented by the Author.

The Inter-Oceanic Problem. Elmer L. Corthell, C.E. Presented by Mr. Mark Stirrup.

The Radical Enlargement of the Erie Canal. E. L. Corthell, A.M., M. Soc. C.E. Presented by Mr. Mark Stirrup.

MAPS.

Croquis de L'Afrique Equatorial, 1885. The Official Map of the Congo Free State. Presented by Col. Strauch.

Stanford's Map of the British Colonies and Possessions on a Uniform Scale, $\frac{1}{7603200}$ = 120 statute miles to 1 inch. Presented by Mr. Ed. Stanford, London.

JOURNALS, &c., OF SOCIETIES.

Proceedings of the Royal Geographical Society, London, Nos. 7 (July), 8 (August), 9 (September), 10 (October) 1885. The attention of the members is particularly directed to the following articles :—

- (7) Annual Address. By the Right Honourable Lord Aberdare, F.R.S., President.
- (7) Eastern Africa and Map. By Consul H. O'Neill, F.R.A.S.
- (7) Note and Map of the Bechuana Land Protectorate.
- (8) The Ascent of Mount Roraima. By Everard Im Thurn. With map.
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- (9) Caves and Ruins at Penjdeh. By Capt. F. de Laessoë.
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The Scottish Geographical Magazine, Nos. 7 (July), 8 (August), 9 (September), 10 (October), 1885 :—

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Proceedings of the Philosophical Society of Glasgow, 1884-5. Vol. 16.

On the Composition of Ocean Water. By W. Dittmar, F.R.SS.L.E.

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Ain—Bulletin de la Société de Geographie de l'Ain, No. 3, Mai-Juin, 1885.

Mythology.

The Swiss.

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(1) The Dictator Francia, or a Bloody Page in the History of Paraguay.

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(2) Proceedings of the Society.

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(2) The Argentine Expedition and Dr. Crevaux's Researches. By Vice-Consul M. A. Baguet.

(2) African News. Capello and Ivens.

Argentine Republic—Commercial Statistical Abstracts, No. 33 (June), 34 (July), 35 (August), 36 (September). The Statistics of Commerce and Navigation of the Argentine Republic for 1884. By the Government Statist.

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Zululand and the Zulus. Parts 3, 4, 5.

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The Congo Question. By J. du Fief. With map.
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- Commercial Condition of Massowah.
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  - Japan.

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- V. Giraud's Travels to the Central African Lakes.
- French Industry and Commerce of the Middle Ages.
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- Correspondence, &c.

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- Travels, Notes of, Classified as to the Regions, viz.—
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  - America.
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- List of Members and Corresponding Societies.
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- Uganda and its King M'tesa. Dr. Robert Felkin.

Rouen—Société Normandie de Geographie. January and February, 1885.
The Navigation of the Red Sea.
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The Inauguration of the Oran Museum.
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French Interests in Morocco. With numerous illustrations.

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——— Chronicle of Geographical News and Events.

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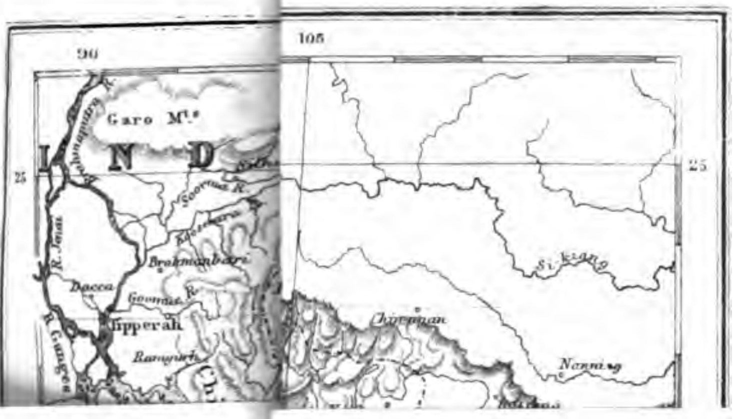

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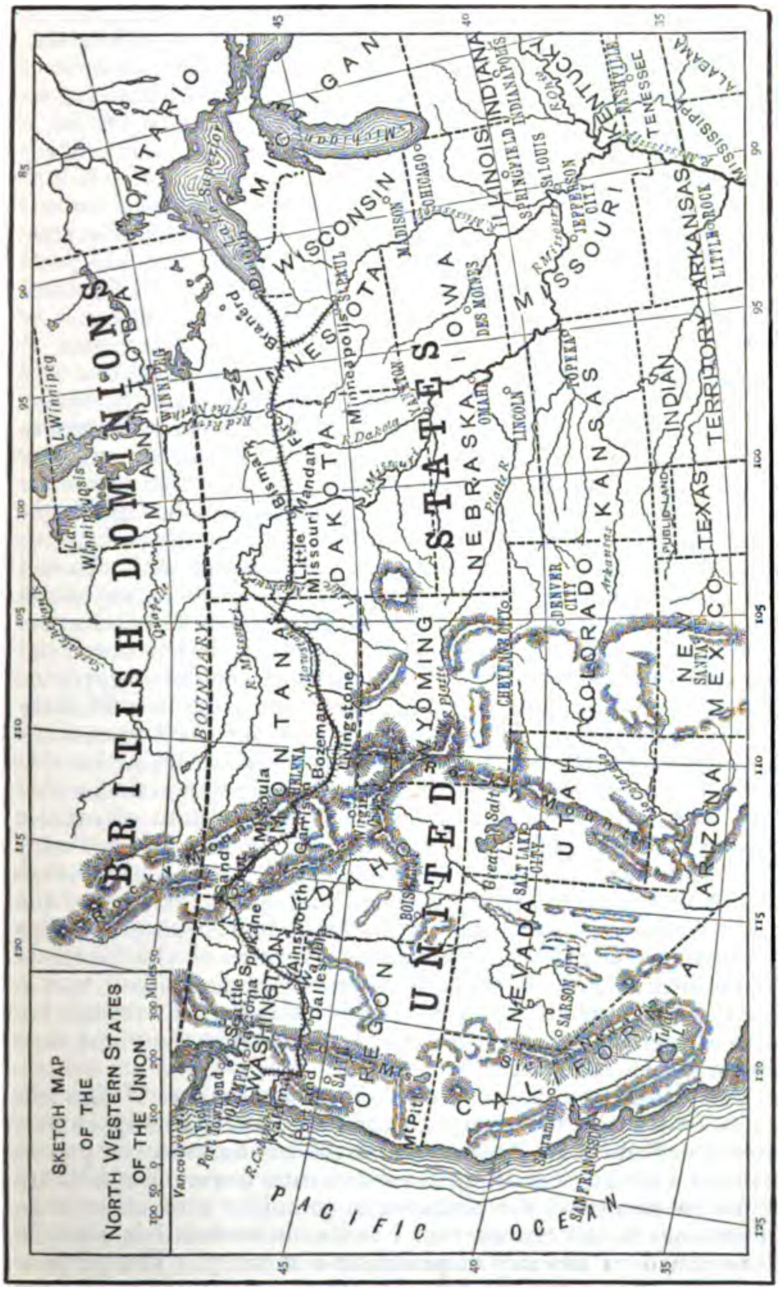
THE GREAT NORTH-WEST: THE PACIFIC SLOPE.

BY REV. S. A. STEINTHAL.

[Delivered before the Members of the Society, at the Manchester Athenæum, November 11th, 1885.]

IT requires a considerable amount of courage to venture upon an address to a scientific society like the one I have the honour of standing before this evening, upon so threadbare a subject as a trip across the United States of America. So many English men and women make the tour every year that if I had not been encouraged by the request of your Committee I should not have dared to undertake the task. It is true my route was not the ordinary one, and I think that it has not yet been traversed so often but that I may be able to describe some districts as yet but little known even to citizens of the United States themselves. I was one of the fortunate folk invited by the Northern Pacific Railway Company to witness the driving of the last spike of their line, which was to unite the Atlantic with the Pacific coasts; and sharing with other guests their princely hospitality, was privileged to see a portion of North America which has not as yet been visited by so many travellers as the ordinary route to San Francisco. I shall not weary you by describing the journey across the Atlantic, or by telling you my impressions of the Eastern States of the Union, of the Falls of Niagara, or Chicago. They do not lie on the North Pacific line, though you pass them *en route* to it; and though our generous hosts gave us time and opportunity to visit them, I shall hasten to the spot where we entered upon the line which, before many years will have elapsed, will have thrown open to the enterprise and industry of the emigrants from the Old World, as well as the Eastern States, some of the most fertile soil of the Great Republic.

The North Pacific Railway has two starting points in the east. One is Duluth, at the western extremity of Lake Superior, the other is St. Paul, the capital of Minnesota, on the Mississippi. As it is just possible that there may be among my audience some persons not familiar with American geographical magnitudes, I may mention that St. Paul, by the shortest route, is 1,322, by the longest 1,570, miles from New York, or about as far from New York as Athens is from London, while the Mississippi, which is navigable from St. Paul to the Gulf of Mexico, gives a waterway of over 2,000 miles. Lake Superior, upon which Duluth lies, is called a lake, it is true, but it is more like an inland sea, covering an area of 31,400 square miles, only 360 square miles less, therefore, in area than the whole of Ireland. Minnesota, the state of which St. Paul is the capital, was organised as a territory in 1849, and admitted as a state in 1858. It has an area of 83,530 square miles, and is larger, therefore, than England and Wales by 25,000 square miles. The most striking feature of the state is the immense number of lakes which are to be found in it. Upwards of 7,000 have been counted, varying in size from Red Lake, covering 340,000 acres; Mille Lacs, 130,000; Minnetonka, 16,000; and many others of 5,000 acres and under. The soil is very rich and well wooded, one-third of its area being covered by forests of oak, maple, hickory, elm, besides a large amount covered with pine and cottonwood. The climate is said to be most healthy, although the temperature has a most extensive range, varying from a mean of 18° below zero in winter to 70° in summer. The dryness and stillness of the air, however, render this temperature less unpleasant than a much higher temperature in this country. I was told by many residents that a winter's day, with the glass at 12° below zero, was really enjoyable, and that when the temperature was not lower than this, outdoor employment was quite practicable. That their statements are correct I saw by the flourishing condition of the state. Not only were the towns rapidly rising into prosperity and wealth, but the agricultural settlements looked most flourishing. The history of the state is an exemplification of the rapid growth of the great west of the Union. When the territory was organised in 1849, and St. Paul was named as its capital, there was no map in existence on which that settlement was marked: all that could be said of it was that it was somewhere near the Falls of St. Anthony. When I visited it in 1883 its population numbered 75,000. The starting of the train from St. Paul which was to cross the continent was celebrated by the people with great rejoicings, and one of the most striking features of the procession which defiled before the guests of the North Pacific Railway Company was the original post-office of the town, a small set of pigeon-holes, which in 1847 had dealt



SKETCH-MAP OF THE AMERICAN NORTH-WEST (UNITED STATES).

with some two hundred letters, while in 1883 the correspondence was counted by millions. The town is well built. Many of the houses are as substantially erected of brick as any in England, while the majority, like in all the Western States, are built of wood. Every one who has been in the States will, however, be well aware that wooden houses can be most comfortable dwellings. Indeed, we need not go so far as America to know that. Every traveller in Switzerland, in Sweden, or in Norway can tell how wooden dwellings can be made to resist more inclement seasons than our brick or stone houses are exposed to. St. Paul's prosperity is altogether due to the fact that it is the meeting point of the railroads of the great North-west as well as being the head of the Mississippi Navigation. There are, with the North Pacific Railway, no less than six trunk lines which terminate at St. Paul, and a large amount of the traffic for Manitoba and Winnipeg, as well as the whole traffic for Oregon and Washington and the intermediate territory, passes through its streets. Commercial interests, according to the statistics of 1881, are very great. According to the returns of that year the wholesale trade of St. Paul amounted to $51,000,000, and it has no doubt greatly increased since then, owing to the vast increase of means of communication. But I was deeply impressed with the fact that the people were evidently not so absorbed in industrial pursuits as to neglect intellectual and spiritual cultivation. There were no less than 45 places of worship in the town, and 14 public schools, with no fewer than 7,000 scholars, supported by a public grant of $120,000, or about as much as our Manchester School Board rate. In private schools there were 2,500 children. The decorations of the town and the procession manifested an amount of taste and poetic imagination that would have been worthy of a city with a long tradition of artistic cultivation. Coming as I did to the States with the ordinary ideas of the worship of the almighty dollar, I was amazed with what I saw, not only in St. Paul but all along the line of the rail, wherever an opportunity was offered to the people to give an expression to their recognition of the value of the means of communication which the new road afforded. There was a grace and poetry about their demonstrations which revealed a sense of there being something more desirable in the world than mere material prosperity.

Ten miles from the town of St. Paul, almost due W. from it, lies its rival town, Minneapolis, situated on the Mississippi river, where the Falls of St. Anthony, with their immense water power, have created this flourishing manufacturing town. The falls are not to be compared for picturesque grandeur with other well-known ones in the States; but I think no waterfall is made to do so much in the way of productive industry. The perpendicular height of the chief fall is not more than 18ft., but the

Mississippi in passing through Minneapolis falls not less than 82ft., and its rapids are very fine. The force which it is calculated can be derived from the river amounts to 120,000 horse power. This power is freely utilised in various ways. I said just now that the State of Minnesota is to the extent of one-third of its area covered by forests. The supply of timber to the sawmills of Minneapolis is enormous. The number of planks turned out by them in 1882 was no less than 314,362,166ft.; the shingles numbered 138,564,000, and the laths 61,330,380. This immense amount does not cover the whole production of the state, as on the line of country through which the North Pacific Railway runs there are sawmills which in the year 1882 produced, over and above the amount stated, above 282,492,834ft. of planks, 104,103,000 shingles, and 44,620,000 laths. Situated as Minneapolis is on a railway line which runs through the extensive corn-producing territories of Dakota and the Far West of the States, and which is connected with Manitoba and Winnipeg, it is but natural that its material facilities should be utilised in converting the grain which inevitably finds its way thither into flour. You will therefore not be surprised to hear that there are 26 large flour mills, turning out no less than 26,000 barrels of flour, each barrel holding 196lb., or somewhat over 2,400 tons per day. The mills are, of course, very large—one which I saw, the Pillsbury A, is 180ft. long by 115ft. in breadth. It has seven stories, and 2,400 horse power is used in driving its machinery. The mills of Minneapolis have adopted the very latest improvements in machinery and construction. Even the very dust which arises during the grinding of the grain is collected by an ingenious contrivance, and is utilised in producing food for cattle. Woollen and cotton goods are extensively produced here, and the active enterprise of the place has collected a population which already exceeds that of the neighbouring town of St. Paul. But here, as in St. Paul, commercial activity has only stimulated intellectual and artistic cultivation. The schools are as numerous as in its rival, but, in addition, Minneapolis boasts a free University. When the state was organised, a certain amount of land was devoted for the purpose of its establishment, and a liberal vote is annually given for the purpose of its support. It does not confine its work to the ordinary subjects of academical study, but has several technological classes, devoting especial attention to matters connected with scientific agriculture. A striking feature in its organisation is that its classes are open to all qualified students free of charge, and it admits women on equal terms with men. In the year 1882—the last completed year for which I obtained information—the number of students enrolled was 253, of whom 72 were women. It was a most striking illustration of the rapid growth of civilisation to visit these two flourishing cities, with every evidence of prosperity and modern comfort, and to remember that hardly more than twenty years ago the early settlers of this district had been massacred by the Sioux Indians, who naturally enough resented the white man's intrusion on their hunting-grounds. But it was just this very massacre which led to the Indian war, which drove the natives further west, and thus gave the security needed to the settlers who followed the successful advance of the United States army.

From Minneapolis I made an excursion to one of the loveliest spots you can conceive of for a summer's holiday—the Hotel Lafayette, on Lake Minnetonka. It is a large hotel, as you can imagine, when I tell you that I arrived with a train containing about two hundred passengers, and found a considerable company already at the house, and yet, without any fuss or trouble, we were all accommodated, and that evening we sat down to a grand banquet given to the North Pacific directors and their guests by the municipality of St. Paul. Our *menu* was printed on satin, and though some of the dishes bore witness to the fact that we were in the United States, yet the general character showed that French cookery had made triumphant progress into the Far West, and that, where a generation ago none but red men had lived in savage simplicity, the tastes of the most fastidious epicure were now consulted. The hall in which we dined was gaily decorated with rare plants and flags, and was lighted by electricity; but one of the disadvantages of civilisation followed us into the Far West. This was a printed list of no less than eleven toasts, and as the President of the United States had somewhat unexpectedly come to honour the start of the first train which was to cross the continent on the North Pacific line, an unavoidable twelfth toast was added in his honour. Few, indeed, of the orators could make themselves heard, but the fine voice of Mr. Arthur sounded clearly through the vast hall, as in well-turned sentences he expressed his sympathy with the enterprise, which he trusted would greatly add to the prosperity of the great nation over which he had been called to preside. It was after this banquet that our train started, at midnight, for its western trip, and if you will permit me, I will now briefly sketch in outline the course which the railway takes from St. Paul across the Rocky Mountains and down the Pacific slope.

St. Paul lies 750ft. above the level of the sea. From this point the line runs in a north-westerly direction for 135 miles to Brainard, where it joins the line which runs from Duluth, on Lake Superior, a distance of 115 miles. During this run the railway rises gradually, till at Brainard it attains an elevation of 1,200ft. above the sea level. Leaving Minnesota at Moorhead, on the Red river, we enter Dakota at Fargo, on the same river, and, running across the prairie land, we reach Bismarck, the capital of that territory, 465 miles from St. Paul, and find that we have reached an elevation of 1,700ft. Here we strike the Missouri river, about 2,000 miles above St. Louis, where it joins the Mississippi. We cross by a bridge which is 1,426ft. in length, with vast embankments on each side leading up to the bridge, while the river itself is confined by a huge dike on the western shore. From this spot the railway runs almost due west to Little Missouri, a place situated in the so-called Bad Lands (of which I shall have to speak more at length subsequently), 620 miles from St. Paul, where it has already reached the height of 2,380ft. above the sea level, and soon after quits Dakota for Montana, passing now through a more hilly country, till it reaches the foot of the Rocky Mountains at Livingstone, 1,020 miles from St. Paul and 4,200ft. above the sea level. The ascent of the mountains here begins, and in a run of 20 miles the Bozeman tunnel is reached, 5,665ft. above the sea level, the highest point of the whole line. When I was there the tunnel was not completed, and we had to cross the pass by a temporary line, which crossed the crest of the hill at 5,800ft. above the sea level. We had therefore to make a very rapid descent to Townsend, about 1,110 miles from St. Paul, where the railway crosses the Missouri river again at about 3,850ft. above the sea level, whence it rises once again very rapidly to the summit of the Mullan Pass, some 60 miles further on, where it passes through a tunnel 5,547ft. above the sea level. Here the summit of the Great Divide is reached, and at the point where it strikes the Clarke's fork of the Columbia river, after traversing about 1,320 miles from St. Paul, or 150 miles from the Mullan Pass, the line has already sunk to 2,400ft. above the sea level. Three hundred and sixty miles further on, at a distance from St. Paul of 1,680 miles, it crosses the Snake river, only 280ft. above the sea level, and then by a very gradual descent reaches Portland, in Oregon, 2,000 miles from its starting point, at 50ft. above the sea level. Here the river Willamette gives access to the Pacific to vessels of the largest tonnage, but the North Pacific sends on a branch line to Tacoma, on Puget Sound, making its full length 2,035 miles, while it is still working at the completion of the branch to Seattle, which will give a complete extent of 2,073 miles from St. Paul, or, by the shortest route, of 3,395 miles of direct railway communication from New York to Seattle, from which place a few hours' sail takes you to Esquimault Bay, the harbour of Victoria, the capital of Vancouver Island.

The route thus rapidly described gives us a clear conception of one of the great features of the geography of the North American country. Starting from the Atlantic Ocean we rise in 2,500 miles to an elevation of well-nigh 6,000ft., and in 600 miles we descend again to 30ft. above the level of the Pacific.

But I must now try to picture to you something of the scenery through which this long journey carries you. As I said, Minnesota is specially remarkable for its lovely and well-wooded lake scenery. Its well-watered fields have become the seat of many a prosperous farmer, and land is valuable where it has been cleared, having risen to $25 or $30 an acre, instead of $4, at which price uncleared prairie land can still be purchased in Minnesota, while still further west it can be had at from $2·60 per acre. Yet all this beautiful country, less than 100 miles west of the Mississippi, was as late as 1862 the scene of a great Indian massacre. The Sioux, in August of that year, attacked the unsuspecting settlers along a line of about 200 miles, killing 2,000 men, women, and children, and burning down their farmsteads, which encroached on the best hunting-grounds of the aborigines. But Indian raids, though they may be terrible while they last, cannot stay the onward progress of civilisation. The United States troops soon drove the native warriors out of the state, and emigration once again began to flow, though its progress was impeded by the great war which then divided North and South. Many Scandinavian and German colonists have settled in this district, and from what I heard from them, they were delighted with their new homes, and the productive character of their investments. At Moorhead, the last station in Minnesota, we strike the Red river, which is navigable hence to Lake Winnipeg. The course is almost due north, and as it freezes every winter, there are annual spring floods, as the southern part of the stream naturally thaws before the northern portion is open for the flood water to run down. The alluvial deposit thus left on the fields adds greatly to the agricultural productiveness of the district. Crossing the river we enter Fargo, the first town in Dakota, a territory which promises to be the greatest wheat-producing district of the North-west. The area is no less than 153,000 square miles. As such large figures are apt to confuse rather than to give information, I would remind you that Great Britain and Ireland cover a little over 120,500 square miles. Crossing this territory gave me my first real experience of prairie scenery. My old idea of a country level like the great Hungarian puszta was soon dispelled as we passed over the undulating ground, but what did strike me most after leaving Minnesota was the absence of everything like forests. A tree was a rare sight, till we reached the hills again in Montana. Towns are rapidly rising into importance along the railway line—indeed, immediately on entering Dakota we come to one of these promising western settlements, Fargo, with 10,000 inhabitants, whose prosperity dates from the establishment, a few years ago, of the great Dalrymple farm. It seems strange to find so young a place so flourishing. About 1872 it was only a hamlet, now it has tramroad cars running through streets lighted with electricity, four banks, many manufactories, several large elevators, a well-built brick schoolhouse, a high school, and several ward schools. When we arrived at the station we found a magnificent display of the agricultural produce of the district, giving us a high opinion of the fertility of the soil and the skill of the farmers. The Dalrymple farm,* which is very near to Fargo, is one of those immense enterprises which can only exist in such a country as the great North-west. A small company of capitalists bought a large tract of country, and appointed Mr. Dalrymple as the manager of the farm. It is divided into three parts, but the whole covers 75,000 acres or 117 square miles, an area not far below that of the whole of Rutland, which covers 94,000 acres. In the first year of occupation (1875) Mr. Dalrymple ploughed 1,280 acres. When I passed through the farm there were no less than 27,000 acres of wheat. It was a magnificent sight to look for miles over the waving fields of golden grain. Of course, operations on so mighty a scale must be carried on by a very highly organised system. Machinery is largely employed. I saw some six steam threshing machines at work myself, and I was told there were twenty in use on the farm. I was surprised to hear that steam ploughing was not found economical, and that horse or mule power was found to be more profitable. The average production per acre is said to be 20 bushels, though some persons to whom I spoke placed the amount at a much higher figure. The profits on this farm in the year 1882 are said to have been $216,000. I give these figures for what they are worth, but I cannot say that I have great confidence in the statistics furnished to me by farmers while travelling through this wonderful country, as it now and then appeared to me that there was a tendency to glorify the productiveness of the land, in a way almost approaching to the exaggeration which is characteristic of American humour. We were not unfrequently shown land from which we were told 40 bushels per acre could be reaped. I think the reports published by the Department of Agriculture in Washington are more trustworthy, and they give for the 1,008,000 acres under wheat in Dakota an average of 16 bushels; for Indian corn, of which there were 270,058 acres, an average of 18·2 bushels; of oats, of which there were 210,000 acres, an average of 42·9 bushels. These figures are, I think, sufficiently satisfactory. It must be remembered that the crops are produced in almost virgin soil, and that manure and other expenses necessary in our long-cultivated farms are not yet required. About 40 miles west of Fargo we had a slight accident, the results of which were not all uninteresting. We were about two miles to the east of a new prairie settlement, which, like all

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* See Note (page 267) on "The Sykes's Farm in Manitoba."

American towns, called itself a city. Tower City was founded in 1879. Its first settler, with a considerable number of his fellow-townsmen, had soon found their way to us on the prairie, with their light buggies We had wired news of our breakdown to the station by means of an extemporised telegraph station, which was set up at the scene of the accident, and the inhabitants, instead of meeting us, as they intended, at the station, came out to give us their greeting on the open prairie. From the first founder of the settlement I heard its history. Twenty years before he had been across the spot with General Sherman, in pursuit of Indians, and had been struck by the capabilities of the place as promising agricultural wealth. He made up his mind if ever he should be able to go west he should settle there. In 1879 he bought a large tract of land from Mr. Tower, of Philadelphia, which covered the site he had fixed on, at $5 an acre, and had begun farming. The railway passing through his ground soon brought other settlers. He had sold half his original purchase at double what he had given for it, and was living rent free, with every prospect, as he told me, of making money. In the four years which had elapsed since his first settlement, the town had increased, till in 1883 it numbered 800 inhabitants. There were three churches, a good schoolhouse, and various other institutions of a substantial character. The settlers, besides Americans, were principally German and Scandinavians. I found that the sale of liquors was prohibited by a popular vote, and when I asked how the Germans and Scandinavians approved of this, I was informed that at first they objected, but after a few months' experience, they found it so advantageous that they were among the strongest supporters of prohibition. The public spirit of this little prairie city is evinced by their having laid out two public parks, in the centre of one of which is a fountain supplied by an artesian well. The water has slight medicinal properties, similar to the Saratoga springs, and is much valued. The line from here, running due west, passes through a district the soil of which promises an abundant harvest to the agriculturist. There is an abundant supply of good water, and the towns which are rising on every side are already promising centres of productive industry. But the winters are severe, and the snowfall must be heavy. As we passed through several cuttings, I noticed that on the sides of the railway there were double rows of fences, with trees planted between, and was informed that they were intended as wind and snow guards, to protect the line in the winter from snow-drifts, which might impede communication. The planting of trees is very systematically encouraged by the Government in the territory of Dakota, and there is considerable prospect of their wise foresight being rewarded, as there has only been a small percentage of the young plantations which do not look healthy. There is considerable enterprise shown by the authorities in other ways, as we saw at Bismarck, the capital. It lies on the east bank of the Missouri river, with 2,000 miles of navigable water above it on the Missouri and its tributaries, and about the same amount below it to St. Louis. It was founded about the year 1872, and was chosen as the capital of the territory in 1883. In the same year the authorities chose the day when our train reached Bismarck for the ceremony of laying the foundation stone of the capitol. With an amount of daring akin to the selection of the site of the national capitol at Washington, the new building was begun on a hill about a mile and a half from the present town, which lies on the river bank, and we had to drive in procession to the place where the president of the North Pacific Railway Company was to lay the stone. As usual on such occasions we were favoured by many displays of eloquence, but the most interesting speech was delivered by no less distinguished a man than Sitting Bull, the great Sioux chief, who commanded the tribe when General Custer and his troops fell into an ambush and were slain to the last man. Sitting Bull and his Indians carried on the war for many months, but were forced at last to retire into Canada, till in the spring of 1883 they made terms with the United States Government, and were assigned to the Standing Rock Indian Agency in Dakota, about 100 miles south of Bismarck, on the Missouri river. It was a strange sight to see this stern warrior standing up before the crowd of the hated white men, and to hear him wish them success in the enterprise which marks the certain destruction of the red man's supremacy in the North-western prairie land. All along this part of the country we are reminded of the struggle between the races, and hardly an hour passed without being able to see some spot memorable in Indian warfare, either for the defeat of the natives, which is claimed by the white men as a triumph, or for a victory over the whites, which they always speak of as a massacre. The relation of the United States to the Indian is not the brightest feature in their history. The advancing settlers have rarely dealt fairly with the original inhabitants. No doubt bargains were made with the Indians, but in making them advantage was taken of their ignorance, and when extending intercourse opened the eyes of the natives to the paltry nature of the price they had received for their concessions, irritation was aroused which soon led to quarrels and warfare. And now, when, by arrangement with the Government, the Indians are confined to certain so-called reservations, it is not possible to deny that the emigrants from the Eastern States often act in a way which lights again the torch of war. If the reservation offers some attractive spot to the settler, he rarely remembers the exact limits of the reserve, and builds his log huts on the Indian ground. Such inroads are soon answered by a midnight raid on the new settlement, and very likely a life or two is taken, and though the first encroachment was on the part of the white man, yet the Government cannot allow the wild revenge of the savage to go unpunished. An Indian war is the result, and the reserve is pushed further west, and the Indian's hunting-ground is further restricted. The demoralisation which the white man's fire water has caused, the diseases which intercourse with the whites has introduced, are all with more or less speed destroying the original owners of the land; and only here and there is judicious management and benevolent sympathy really civilising the ancient races. I saw a good deal of the Indians of various tribes, Sioux, Crows, Flatheads, Percenez, Pendoreilles, &c., and had some very interesting conversations with some of the agents. I found that wherever the help of the State was given to the Indians in the form of free rations, clothing, and gunpowder, they were gradually dying out; but where the help, by the judicious philanthropy of the agent, takes the form of agricultural implements and seed, and where, as, for instance, around the Jesuit Mission Station of St. Ignatius, in Montana, the Christian zeal of earnest servants of Christ is active, the Indians are gradually settling down to agricultural pursuits. Indeed, at St. Ignatius I saw some cattle ranches managed by Indians, where there were signs of evident growing prosperity, and the Flatheads, I was told, are growing in numbers, entirely owing to the beneficent influences which the Jesuit Mission has exercised among them. The contrast of that mission station, with its well-conducted schools, with the condition of some of the Percenez and Pendoreille Indians I accidentally met with in the woods, not many miles away, and who were spending their whole night by a wood fire, gambling, has deeply impressed itself on my mind; as also did the contrast of the singing of the children in those schools, accompanied by a nun on the piano, and the wild song of the Crow Indians, accompanied on the drum, while celebrating their sun dance, and watching the mystic rites of the medicine men of their tribe. You will pardon this digression, suggested by my interview with Sitting Bull. I may as well say that I was much impressed with the self-sacrifice of these highly-cultivated men and women, living in perfect isolation from all civilised society. They are really doing all that men and women can do to promote the welfare of their converts. They have, after many years of patient work, succeeded in preparing a dictionary of the Kallispel language, which is spoken by several of the tribes, and have printed it in their own mission station, as they preferred doing this to letting one of their number leave the scene of his work for Washington, where the Smithsonian Institute would have brought out the work at its own expense, if one of the fathers would have superintended its passing through the press. They have also printed some simple religious works in the Kallispel language. These works must be of great interest to the comparative philologist, and I believe that our Owens College Library is perhaps the only institution in Great Britain that can claim to possess these specimens of Far Western speech. In old maps the country on the other side of the Missouri is marked as the Great American Desert, and was given up altogether to the Indians, who found plentiful food among the vast herds of buffalo, elk, deer, and mountain sheep that roamed upon the rich pasture lands of the hill country that forms the west of Dakota and the whole vast territory of Montana. The climate here is far more equable than further east, as the Japan current moderates the cold of the winter season. It is equally beneficent in its influence on the west of the American continent as the Gulf Stream on the west of Europe, and its milder atmospheric influence is felt even on the eastern slopes of the Rocky Mountains. It is in these districts that the student of prehistoric times finds traces of that mysterious race the mound builders. About two miles from Mandan one of their cemeteries lies on the bluffs, covering an extent of fully 100 acres. Even the Indians, careful as they are of all tradition, have no knowledge of this people, and all that is known of them has to be learned from the bones which lie here, and the pottery and other remains which have been discovered.

Soon after leaving Mandan we find ourselves in a region where lignite coal is found in considerable quantities, a great blessing to settlers in a district where timber is rare, and fuel, therefore, in the absence of coal, would be scarce. The lignite very often comes quite to the surface, so that it can be quarried without any trouble; but it is not till we reach Sims, 509 miles west of St. Paul, that we find regular mining operations carried on. Of course the mine is but new. The shaft is only 56ft. deep, but passages have been already cut in the lignite 1,000ft. long. The output is over 100 tons a day, and finds ready sale. Its heating power is only about three-fourths that of bituminous coal.

On leaving Sims we enter upon a most curious and interesting district known as the Bad Lands. This name has been given to the country by the old huntsmen and the Indians, not because of the unproductiveness of the soil, but because of the difficulties it puts in the way of those who have to cross it. It consists of a vast series of deep ravines and steep cliffs of the most irregular and fantastic forms. The ravines run in most tortuous ways, and their sides are often actual terra cotta. The origin of this strange freak of nature is very evident. "The whole district, geologists tell us, was once the bed of a great lake, on the bottom of which were deposited for ages the rich clays and loams which the rains carried down into its waters. This deposit of soil was arrested from time to time sufficiently long to allow of the growth of luxuriant vegetation, which subsequently decayed, and was consolidated by the pressure of succeeding deposits, transforming itself into those vast beds of lignite coal which abundantly meet the need of the country for fuel. The various strata thus deposited are all of recent origin, and being without cementing ingredients, remain soft and are easily washed by the rains. When at last this vast lake found an outlet in the Missouri the wear and wash of these strata under the action of rain and frost were very great. Hence the watercourses, especially the minor ones, where the wash has not had time enough to make broad valleys, have precipitous banks and high enclosing bluffs, with curiously-formed and corrugated sides, usually bare of vegetation, and showing only the naked edges of the rich soils of which they are composed. The tops of these bluffs or buttes are on the general level of the whole country, and are equally as fertile." The rich character of the soil is proved by the extensive grazing operations carried on in the district, one large sheep farmer, the Marquis de Mores, being engaged, when I visited Little Missouri, in laying out some 200 acres of land there as a vast slaughter and packing establishment for the produce of his own ranches. The sides of the gorges are, as I said, often real terra-cotta. This strange phenomenon has been caused by the burning of the large beds of lignite which traverse the district, and which were not unfrequently fired by the hunters and the Indians; and when fanned by the strong winds which sometimes swept the plains, produced an intense heat, and made the clay take the form of vitreous slag, sometimes green or brown in colour, and sometimes, when stained with iron, red. For some time this district bore a very lawless character, and within a short distance of the railway I visited the graves of several men who had fallen in an encounter between the settlers and the white huntsmen, who resent the encroachment of the farmers upon their hunting-grounds with as deadly a hatred as the Indians ever did the encroachments of the white men.

Passing from this weird country we soon reach the boundary of the territory of Montana, marked by the side of the road by a tall pole, to which a fine pair of antlers are fixed. Montana averages 275 miles from N. to S. and 550 miles from E. to W., and its northern boundary joins the British Dominions. Its mean height above the sea is 3,900ft., and its greatest height, among the mountains which traverse it, is 11,000ft. These mountains form the watershed between the Atlantic and the Pacific, and give rise to several important rivers, especially the Missouri, and what is called the Clarke's fork of the Columbia river. 1,500 miles of the river are navigable within the territory. It has some very fine lakes. Flathead Lake is 10 miles by 30 in size, and Red Rock Lake lies 6,500ft. above the sea, stretching 25 miles in length. There are 93 million acres, two-fifths of the area being mountain and three-fifths rolling prairie land. The resources of this district seem almost inexhaustible in their promise of wealth. The soil is most productive, and its frequent watercourses and its gentle slopes make irrigation easy, and render the upper ridges of the banks of the rivers excellent arable land. The buffalo grass on the hillsides makes very good grazing ground, while the mineral wealth of the mountains promises a rich reward to the miner. At Glendive, 734 miles W. of St. Paul, we reach the Yellowstone river, 2,070ft. above the sea level, 90 miles from where the Yellowstone joins the Missouri river. The scenery through which the railway runs begins here to grow more picturesque, skirting the clear broad stream of the Yellowstone and running between it and among the hills, or buttes as they are called here, rising perpendicularly several hundred feet. Several important streams join the Yellowstone and add to the mass of water it carries to the Missouri. It was on the banks of one of these, the Big Horn river, which joins the Yellowstone 166 miles from Glendive, that the great massacre of General Custer's troops by the Sioux took place in 1876. Now the territory which the Sioux then held is occupied by large cattle farms, the chief of which have been established by Englishmen, amongst whom we have warm opponents to the present vexatious restrictions imposed upon the importation into this country of cattle. They assert that the clear dry climate of the N.W. prevents any form of cattle disease, and that a healthy and inexhaustible supply of meat can be raised there for use in this country. After crossing the Big Horn river by a bridge 600ft. in length we pass through a tunnel 1,100ft. long, which marks our approach to a more hilly country than we had passed through, and come out into a reach of the Yellowstone valley, where, on the right hand, we see one of the landmarks of the earliest explorers of the district, a great block of yellow sandstone, rising about 400ft. above the river, and measuring about an acre of ground at its base. On this rock, W. Clarke, who with Captain Lewis first surveyed this district, after its purchase from the French, has carved his name, with the date, 25th July, 1806. Though in no way resembling that monument, this rock has been called Pompey's Pillar. We enter soon after this upon the reservation of the Crow Indians, and while traversing the district I had an opportunity of spending some very interesting hours among that tribe, and witnessing the grand festivities of their sun dance, which, with its mysterious solemnities, was as attractive a spectacle to me as the wonders of our train seemed to be to the squaws and children of the tribe. We passed along beneath the shadow of a range of hills bearing the ominous name of Skull Butte, so called in memory of a memorable deed of self-sacrificing patriotism on the part of the Crows. Some seventy years ago the tribe was attacked by smallpox, and the medicine men declared that the evil spirit which caused the sickness could only be driven out by the self-sacrifice of some of the braves. Forty young warriors volunteered, and after the sun dance had been performed, they mounted their horses and rode up to the top of the ridge, where they and their horses were blindfolded. Then, rushing at full speed, they plunged down the steep rocks, and for years after their bleaching bones could be seen, a monument of honest though mistaken heroism and daring. The country more and more begins to show signs that we are approaching the mountains. At Billings, 959 miles from St. Paul, I saw the first evidence of mining operations. Wagons, each drawn by 16 oxen, stood at the station laden with ore brought down from the mines at Barker and Maginnis, forming a more picturesque feature than the rich agricultural produce which was heaped up for our inspection. I heard of valuable coal-mines within thirty miles of the railway, to which a branch was about to be constructed, and gold and silver abound in the district. The clear atmosphere of the country enabled us now to see the outlines of the spurs of the Rocky Mountains, and by the time we reach Livingstone, 1,074 miles from St. Paul, the snowy peaks rise before us, and for the third time the line crosses the Yellowstone river at the foot of the Belt Range.

It is from Livingstone that the line of railway runs along the river to that most wonderful of American wonders the Yellowstone National Park. By a special Act of Congress this marvellous region has been for ever preserved from the encroachment of the settler, and set apart for a recreation ground. If we could imagine our Lake District thus consecrated to the nation's use, but without its towns and villages, its varied industries and its farming operations left quite untouched by the hand of man, we should have some idea of what the United States has secured for the people, but only a very faint conception even then, for the Park is a vast district extending 62 miles in length from north to south and 54 miles in breadth from east to west, and contains therefore no less than 3,448 square miles of territory. Its size is not its greatest wonder. It would seem as if Nature had assembled in its area some of its most surprising phenomena. In the south-east corner is a lake larger than Windermere. The Yellowstone river flows through it, forming magnificent cascades. Its gorges, with precipitous chalk cliffs rising for hundreds of feet above the foaming stream—its hot sulphur springs, leaving coloured deposits in variegated layers, brilliant in the sun's bright rays—its mighty geysers, exceeding in size and number those of Iceland—its beautiful forests, full of most diversified fauna, all combine to make the Park a region of indescribable attraction. And all this is secured for the citizens of the great Republic for ever. No land is to be allotted to settlers, no huntsman is to pursue the game, no miner to explore its mineral wealth; but the nation which, above all others, is spoken of as worshipping material wealth, has, with far-seeing wisdom, set apart this wondrous territory, that man may study and enjoy the wonders and the glories of Nature, unspoiled by human agency, for evermore. To describe the Park would occupy more than one evening, and I must hasten on. The town of Livingstone lies, as I said, at the foot of the Rocky Mountains, and from it our course led to the summit of the Bozeman Pass. The views as you ascend the mountains are very grand. Every now and then you look through vast gorges, closed in by snowclad peaks, while the hillsides are clothed with magnificent pine forests. Some of these gorges are crossed by trestle bridges, which look perilously fragile; and as the rails are laid on open sleepers, and you look down between them to the giddy depths below, it requires a steady brain not to let a feeling of nervousness overtake you. The tunnel pierces the mountain 3,500ft. above Livingstone, 5,572ft. above the sea level, but as it was not completed when we crossed the Rockies, our train had to go, by a steep track, some 210ft. higher, and we crossed the first ridge at about 5,800ft. above the level of the sea. And now we descended some 900ft. in a distance of about nine miles, reaching Bozeman, a flourishing settlement with 3,000 inhabitants, the centre of an active agricultural and grazing country, watered by the Gallatin river, and promising greater prosperity within a short time, as coal, iron, and silver have been discovered within a short distance, in situations easily accessible to mining operations. The road led us through the beautiful Gallatin valley till we reached the junction of the Madison, the Jefferson, and the Gallatin rivers, which are here merged into the Missouri, which flows northward and eastward till three thousand miles away from this spot it joins the Mississippi. With the exception of 18 miles, the river is navigable for vessels of 200 tons burthen the whole distance. The railway passes here through some of the most magnificent scenery, there being hardly any space between the river and the sides of the cañons for more than the double track. There is hardly a more picturesque part of the route, except when later on we reach the banks of Clarke's fork and the Columbia river. This glorious drive brings us to Helena, 114 miles from St. Paul. Helena is the capital of the territory of Montana, and is built on both sides of one of the most celebrated goldmines of the district, the Last Chance Gulch. The mine is no longer so productive as twenty years ago, but the Chinese find it worth their while to continue the work which white men despise, and make a considerable profit. But the neighbouring hills are the seat of many mining operations, and the Assay Office in Helena is a most busy place. The visitors are not always of the most peaceable character. The scales on which the gold dust is weighed are placed behind a strong iron grating, and on a little shelf beside them I saw a loaded revolver lying within reach of the official's hand, ready for immediate use. About 19 miles from Helena the Great Divide, as it is called, of the Rocky Mountains is passed by the Mullan Pass. Here the tunnel, by which the road is to be carried at an elevation of 5,547ft. above the sea level, was not finished when I crossed, so that I had to go by the temporary line which crosses the highest part of the pass at a level of 5,700ft. The views in rising to this point are very grand: the mountains are covered with pine forests, but every now and then, through openings in the ranges, we see the white snow peaks of the higher ridges closing up the valleys. It was a sad sight, however, to see the ravages of forest fires, both on the Great Divide and on the first ridge of the Rockies which we had previously passed. The recklessness with which huntsmen leave their camp fires burning, the sparks from the passing engines, combine to lay waste whole acres of valuable forest. For miles along the line we often saw ruins of magnificent trees, sometimes the charcoaled bark still standing upright and waiting for the first strong breeze to bring the charred shell down. One evening we found ourselves surrounded by one of these fires, and as its flames were approaching a gorge which was spanned by one of the timber trestle bridges, the officials thought it needful to take immediate steps to stay the ravages which the fire was making. Our travelling telegraphist put himself into communication with the nearest station, and soon some eighty men were brought together, who by dint of arduous work stayed the fire before the bridge was really endangered. The wasteful carelessness of all concerned was the topic of much conversation, and it was almost universally acknowledged that before long the vast resources of even the Rocky Mountains might be exhausted, unless something more efficient could be discovered to stay the destruction of forests than the proclamations which the authorities are issuing but seem unable to enforce.

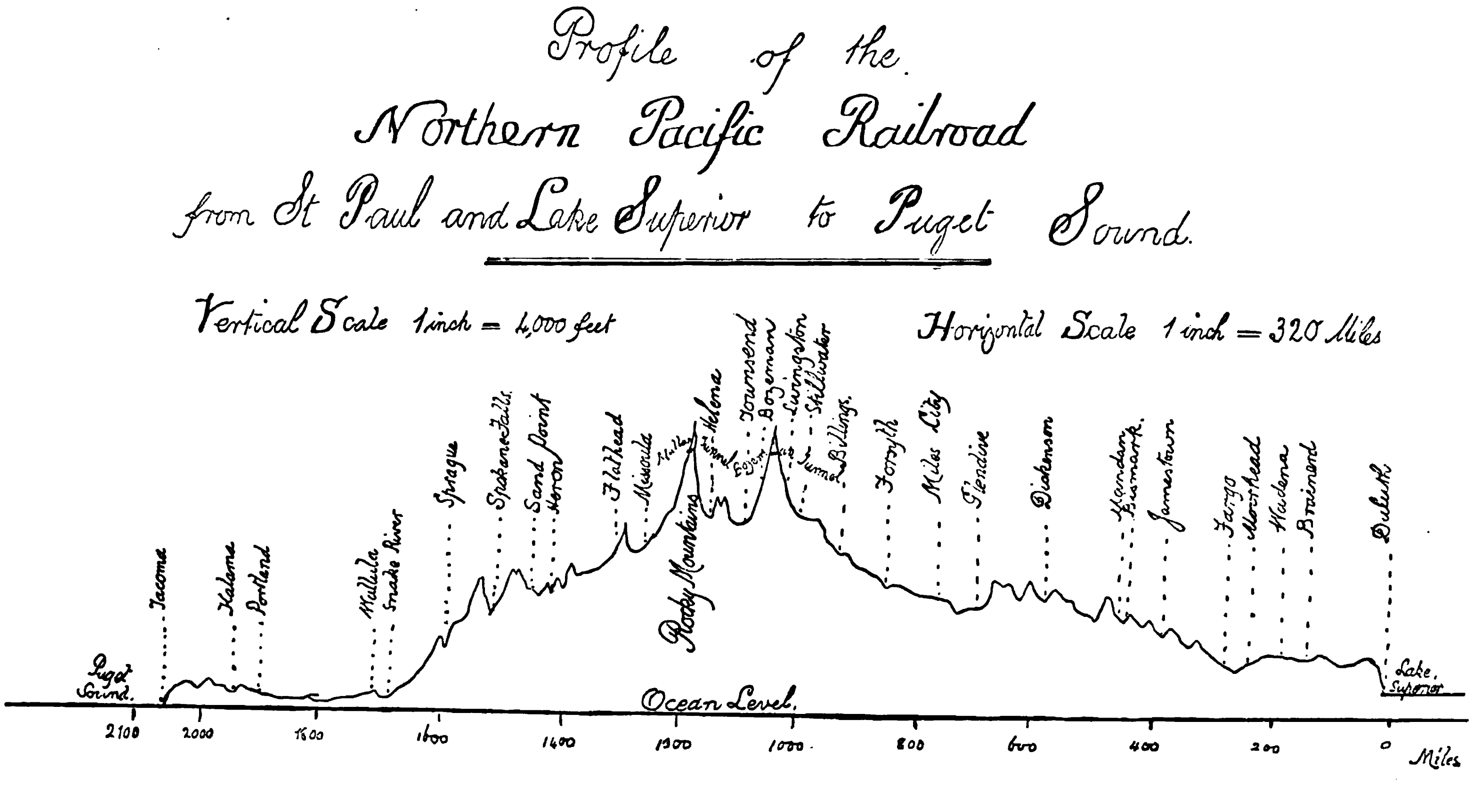
The summit once attained, we soon rushed down the steep slope to the spot where we were to be witnesses of the formal junction of the lines, which, crossing from the Atlantic to the Pacific, were to meet at a little spot on the Pacific slope named after the great Abolitionist leader Garrison. It lies at the junction of two streams, the Little Blackfoot and the Deer Lodge rivers. As yet there were but two or three houses, but it will no doubt become an important spot, as it is the place where the branch line from Butte joins the main track. Butte is one of the most important silver-mining towns in the district, and in the Silver Bow County, of which it is the centre, there are said to be some 300 miles of silver veins, varying in width from 30ft. to 50ft. It was a strange sight to find, when we descended from the train, that a vast wooden platform was erected on the hillside between the line and the Deerfoot river, part of it covered over to protect us from any discomfort either of sun or rain, and to meet two large trains, one from Portland and the other from Butte, so that some two thousand people were gathered together to celebrate the driving of the last spike. On the hillside a battery of U. S. Artillery wakened the echoes with their guns, and while representatives of Germany and England united with the citizens of the United States in rejoicing, it had a strange and somewhat sad effect to see several Indians looking on the proceedings, which we could not help feeling must be finally destroying every prospect of their maintaining even a remnant of their old undisputed sway over these as yet uncultivated regions. The ceremony was a most characteristic one. Here in England we are considered to be fond of speechmaking, but we do not equal our American cousins. When all the guests had arrived, Mr. Villard, the president of the railway company, welcomed us with a few earnest words, and then called upon Mr. Evarts to deliver the oration of the day, telling the story of the North Pacific Railway Company. When its various ups and downs had been described, we were favoured with speeches from the Governors of every state and territory through which the line passes from Minnesota to Washington Territory, each with eloquent words describing the special attractiveness of his own district; and then the representatives of England and of Germany were called upon to speak and add their congratulations on the triumph of the day. When the speeches were at last concluded, the struggle began, and the workmen came rushing from east and west, dragging the rails and laying them on the sleepers which had been previously laid. The men from the eastern side reached the central point amid enthusiastic cheers; and when their western rivals laid their last rail, Mr. Villard, with his baby on his arm, raised the hammer, and gave the blow which drove home the last spike. By an ingenious arrangement, the blow which thus completed the work completed not only the line of rail which spans the vast American continent but completed also the electric current and fired guns in St. Paul and in Portland, and signalled that the work was done to all the chief cities of the United States. We had, of course, more festivities to celebrate the great event, but soon we took our places in the cars again, and were before long speeding through a valley two miles wide, with lofty mountains rising on each side of a clear stream, which bears the evil name of Hellgate stream, while the cañon is called

Hellgate. Why the devil and his home should be connected with so many lovely spots I never can understand, but it seems that, as in Switzerland and elsewhere, so here also on the Pacific slope, we find that natural beauty and grandeur may be connected with the infernal powers. May I tell you an Indian story, which explains why, about 38 miles from Garrison, Beaver Hill almost blocks up the river, and sends it a foaming torrent through a narrow rocky gorge? The beavers, in olden days, rebelled against their king, and he, to bring them to obedience, determined to dam up the stream, so that the rebels might be deprived of water. He piled up rock on rock, till what is now Beaver Hill almost stopped up the stream, when, seeing their danger, they submitted. I do not care so much for the story itself as for this fact, that the Indians say their forefathers learned the story from the beavers themselves, in the good old times, before war broke out between the Indians and the beavers, and the latter have refused to have any further intercourse with their enemies. Near to Missoula, 1,270 miles from St. Paul, the railway crosses Marent Gulch by a vast trestle bridge, 866ft. long and 226ft. high. In the construction one million feet of timber were employed. I know of no buildings that have such a giddy and fragile look as these high trestles, but they are said to be very safe. For a considerable distance the line now runs along the mountain ranges, crossing the valleys, instead of following them, till we descend to the Jocko and Pend d'Oreille rivers in the Flathead Indian Reserve. The scenery here is most lovely, and not far from the railway line excursions can be made into most beautiful and romantic hills, which form the spurs of the Rocky Mountains. We have at home but little conception of what truly virgin country means, but here we can find it. The prairie, the woods, the lakes, the hills, all have a charm, as you feel that you may perhaps be the first to look upon their beauty. We soon reach the Clarke's fork of the Columbia river, one of those vast streams which promise such future prosperity to the United States. It is the largest of the rivers that flows into the Pacific, and drains an area of well-nigh 300,000 square miles. Its length is about 1,400 miles, half of which is in British territory. The portion which we strike on the North Pacific route affords the finest river scenery I have ever seen. The waters are perfectly clear, and down to the water's edge the most graceful forest trees grow; the banks are frequently precipitous, but the forms they take are most attractive. It was a constant panorama of varying beauty, which seemed to pass before us as we rode more than a hundred miles, never leaving the stream out of sight for many minutes. The autumn tints, which are so magnificent in the States, were beginning to display their glory; the maple and the shumac were especially brilliant in their scarlet hues. It was a different kind of beauty that greeted us as we passed through what is called Cabinet Gorge, where the stream is pent in by basaltic rocks, which rise from about 100ft. to 150ft. on either side, and make the stream foam again as it rushes through this pass. It is not far beyond this that we enter the territory of Idaho, and find the river widening out into a lake, called Pend d'Oreille, sixty miles long, if we follow its windings, and about eight miles in average breadth. We are still 1,600ft. above the sea level, and around the lake mountains of several thousand feet rise, all well wooded and well supplied with game. The hills rise very frequently straight from the water's edge, but wherever there is any beach it is always well wooded. A fine view of the lake is obtained, as for a mile and a half the line runs across a trestle bridge, which spans the lake where one of the tributary streams enter it, and then it skirts the north shore for twenty miles. There are several stations on the lake, and every one opens new and beautiful views upon the mountains which surrround it and the beautiful islands which dot its surface. It was a most delightful change, after spending day after day upon the railway, to make excursions on the steamers which ply upon the lake and allow visitors to refresh themselves with its varied beauties. Between lake Pend d'Oreille and the Spokane valley, for about one hundred miles, the road offers no attractions. It leaves the mountains behind, and runs along a series of mountainous valleys clothed with fine timber, with here and there a clearing, and a sawmill and a station with a fine Indian name, but with very few signs of active settlement, till we reach the Spokane valley and enter the Territory of Washington. Washington measures 250 miles from north to south, and its flat distance from east to west is 360 miles. It has a most extensive coast-line of 1,138 miles, though its direct length is only 245 miles. It covers 69,934 square miles, or 11,748 more than England and Wales. It has a most fertile soil, and is rich in coal and iron, as well as in timber, while its rivers are most prolific in fish. A large portion of it is, however, covered by Puget Sound, and by mountains, the Cascade range running through its entire length, but 40,000,000 acres are capable of cultivation, and will, no doubt, before long be profitably occupied. The first place in its territory which deserves note is Spokane Falls, where the water power of the Spokane river is made use of to drive a considerable number of corn and saw mills. The river is half a mile broad, and the falls—or rather the rapids—extend for a considerable distance through the town till they plunge in the final cascade into the cañon. Spokane Falls is the oldest settlement in the territory, and was established as an active place before the railway was opened. After leaving Spokane Falls the line passes through a dreary rocky country, following the beds of old watercourses which have been long dried up. The impression which is made upon the traveller's mind is anything but pleasing—though at the stations, the trees which have been planted by the railway company seem to flourish, as if irrigation and care could be relied on to make even this desert flourish again. It is a real pleasure at last to find yourself at Ainsworth, where your eye is refreshed by the broad expanse of the Snake river, which here falls into the Columbia, 1,680 miles from St. Paul. When I crossed the river the company was obliged to send the train across in large steam ferries, as the bridge was not yet finished. It will be a grand structure when completed, as it will be 1,541ft. long. The central span is to be a swivel bridge, so that the navigation may not be impeded. On crossing the river we find the junction at Wallula, whence the branch line runs down to Walla Walla, a most fertile agricultural district. It amply repays the traveller to run down to the town of Walla Walla, which struck us as one of the most promising settlements we visited. The town is well built, it has many brick houses, and its schools were certainly the most handsome edifices in the place. There was an exhibition of produce prepared for our inspection when we visited the town, and some of the grain and fruit displayed did the highest credit to the farmers of the district. The line from Wallula Junction to Dalles City, on the Columbia, is even a drearier desert than that through which we passed on our way to Ainsworth. For 214 miles it was an unbroken sandy waste, though a few miles to the south we were told we should be able to find a very fertile soil. The wonderful sight therefore which greets the traveller at Dalles is all the more welcome. The Columbia river, which at Ainsworth is nearly a third of a mile broad, rushes through a narrow, precipitous, rocky gorge, 180ft. in width. From the water's edge to the summit of the rock is fully 1,000ft., and you can imagine what an imposing spectacle it is to see this mighty stream boiling and foaming along this narrow glen, which extends about a mile and a half, and which falls about 90ft. in that distance. From Dalles, Mount Hood, one of the loftiest peaks of the Cascade range, is visible, rising to about 11,700ft. above the sea level, and, of course, covered with eternal snow. It is, like all the chief peaks of the Cascade range, an extinct volcano. It is a curious and interesting sight to look upon these lofty peaks, Mount Adam, Mount Ranier, or Tacoma, and Mount Baker. The Cascade range is, generally speaking, about 4,000ft. to 5,000ft. high, but in isolated grandeur these mighty peaks rise up above the lesser hills in purest white. They make a greater impression than do the highest Alps, as they rise almost from the sea level, and their whole height is visible, therefore, to the spectator. From this spot the railway runs for a long distance along the river side, beneath a range of rocks, from which the track has been won by a succession of gigantic blastings. The view is grander than can be described, the hills rising almost perpendicularly for 2,000ft.; and every now and then magnificent waterfalls come with almost unbroken leaps from the very summit. I can only compare the scene with some of the finest views on Norwegian fjords, when in the Ghyranger and Sojne Fjords I have been irresistibly reminded of what I had seen in the Far West of America. Some 60 miles from Dalles the navigation of the Columbia river is broken by a series of rapids called the Cascades, round which a canal is being cut, so that the advantage of cheap water communication may be secured from Dalles City to Portland in Oregon, and direct by Astoria with the Pacific. The Columbia river is one of the sources of wealth for both Washington Territory and the State of Oregon, not only because of its being a navigable river, but because of its inexhaustible supply of salmon. The number of canning factories along the river is very great, and it was a most curious sight to see how fishing was carried on by machinery along the banks. In many places walls are built in the river, at a slight angle with the bank, and waterwheels erected, with bag nets instead of buckets. As the fish come along the stream they are caught in these nets, and as they revolve the fish are thrown into slanting troughs, down which they fall into the hands of the fishermen. The numbers of fish which positively crowd the streams in the season are almost incredible. From a private letter I have seen within the last month I learned that in one of the streams a little to the north of the Columbia one boat caught and landed at the wharf, in fifty-five minutes, no less than 385 salmon, and that the number caught in the Frazer river was so great that the canneries could not take them all, and the fishermen were forced to sell them at two cents, or one penny apiece, in the open market; and yet I have heard of canneries where they turn out 32,000 tins of fish per day.

The railway leaves the Columbia river, and after a short run through the forest reaches Portland, a flourishing town with about 50,000 inhabitants, on the Willamette river. It is the chief town of the state of Oregon. Vessels of the largest tonnage come up to the river side, and the whole place gives evidence of a most prosperous trade. From Portland magnificent steamers ply to San Francisco, to British Columbia, and to Alaska, and an active trade is carried on with China, Japan, and Australasia. I was struck with admiration at the magnificent educational institutions with which the place abounded, and found the schools fitted up with far better appliances than our ordinary schools. I was especially pleased to find that the kindergarten system was appreciated for infants, and that the teachers were looked up to by the inhabitants generally as amongst their most honoured citizens. As in most of the cities on the west coast, the Chinese form a marked feature in the population. There is an entire Chinese quarter in Portland, with its joss-house and theatre. I visited the latter, and received an indelible impression. What the play was about I could not learn, though ready interpreters supplied me with contradictory explanations. It was either a drama, in which two monarchs, who had lived for years together in the most cordial bonds of friendship, were at last compelled, from state reasons, to bid each other farewell, (and the play described these causes, and demanded our sympathy for them in their sorrow at being obliged to separate), or it described the bitter antagonism of these kings, and was intended to evoke our horror at their fierce antagonism and deadly feud. The stage was a bare platform, with no scenery, but the various actors appeared in magnificent costumes of the richest silk, heavy with the most gorgeous embroidery. Their shrill voices rang in one continued scream, for they had to make themselves heard above the sound of an orchestra which consisted of metal cauldrons, which the musicians were continually beating, till it sounded like a boilermaker's yard. I remained about a quarter of an hour in the place, till all the actors sprang upon a row of benches arranged along the back of the stage, when the orchestra, strengthened by a number of bells, all jangled out of tune, redoubled its discord, and the players raised a chorus of such unearthly horror that I fled. I was told afterwards that this was the chorus of angels, welcoming the departed kings into the heavenly world.

The prejudice against the Chinese in Oregon and all the Western States is intense. They are the most diligent and painstaking of workpeople, and so economical that they work at wages which no American will condescend to accept. They are hated, therefore, with incredible bitterness, and laws have been passed prohibiting their entrance into the States, while not unfrequent riots occur, with the result of their being expelled from the smaller towns, where the authorities are too weak to afford them protection. But still in the larger places they abound, and are most useful servants, while many of their merchants make fortunes, with which they return to their native country.

Portland being the great port of Oregon is one of the termini of the North Pacific Railway, but it has branches which extend hence to Puget Sound, and bring the States into communication with British Columbia and Vancouver Island. The magnificent waters of Puget Sound cover 2,000 square miles, and offer deep water and safe anchorage everywhere. Upon its banks there are numerous rising settlements—Tacoma, at the foot of the grand mountain of that name, Seattle, Fort Townsend—all full of that wondrous American energy and life which brings into the wilderness the latest inventions of civilised life, and begins a new existence with the accumulated experience of all the ages, but with the resistless vigour of unexhausted youth. It was a strange contrast which met me when I landed in Vancouver Island, and drove along a macadamised road to Victoria. I had not seen so good a road since I left England. The houses had gardens, with well-trimmed hedges, such as I saw nowhere in the States, except in Germantown, near Philadelphia. Everything looked more substantial than in the western towns of the United States, as if the people were not intending to remove if the place did not suit them, but as if they were determined to make things comfortable; but the town of Victoria looked sleepy and quiet when compared with the new settlements in Washington, just across the strait, and the energetic busy life was wanting which I had been seeing everywhere in crossing the continent. I can imagine that some of the places I have visited in the Union may be deserted already, if the anticipations of the settlers have not been realised, but I feel convinced that in 100 years from now Victoria will be a flourishing and growing town. The plodding perseverance of Englishmen is not soon discouraged; but Englishmen do not display that wonderful enterprise and adaptability to new conditions which is rapidly conquering for civilisation the wilderness where but a generation ago the Red Indian held undisputed sway. The journey has made me feel an unbounded sense of the unlimited possibilities of growth for our race. There seems to be hardly anything which man needs which cannot be produced in those regions which this North Pacific line is opening to mankind; and though for a season these resources may remain undeveloped, yet the time must come when what but a few years ago was marked upon the maps as the Great American Desert will have become well-nigh the most productive and most prosperous region of the great American continent.


Profile of the
Northern Pacific Railroad
from St Paul and Lake Superior to Puget Sound.
Vertical Scale 1 inch = 4,000 feet
Horizontal Scale 1 inch = 320 Miles
Puget Sound.
Tacoma
Kalama
Portland
Wallula
Snake River
Sprague
Spokane Falls.
Sand Point
Heron
Flathead
Missoula
Mullan Tunnel
Rocky Mountains
Helena
Townsend
Bozeman
Bozeman Tunnel
Livingston
Stillwater
Billings.
Forsyth
Miles City
Glendive
Dickinson
Mandan
Bismarck.
Jamestown
Fargo
Moorhead
Wadena
Brainerd
Duluth
Lake Superior
Ocean Level.
2100
2000
1800
1600
1400
1200
1000
800
600
400
200
0
Miles

NOTE TO THE REV. S. A. STEINTHAL'S PAPER.

The next station on the Canadian Pacific Railroad, west of Indian Head, is the rising little town of Qu'appelle. It is pleasantly situated in a park-like country, and is at present the most important town between Brandon and Regina, being the distributing point for Fort Qu'appelle, the Touchwood Hills, and the Prince Albert Settlement. The principal buildings are a new flour mill, on the roller system, with a capacity of about 150 barrels *per diem*, and an elevator constructed to hold 35,000 bushels of grain. The pro-cathedral of the diocese is situated here, and the Presbyterians and the Methodists have each their church. There are two comfortable hotels, and numerous stores containing every article of which a colonist stands in need. Qu'appelle also boasts of a bank, a weekly newspaper, and of commodious Government Immigration Buildings, situated close to the railway station, where intending settlers can lodge for a reasonable period whilst in search of land or employment. There is every facility for cooking within the building, but the immigrant has to provide his own bedding and food. The land to the north and north-west of Qu'appelle Station is exceptionally good. It is partly park-like and partly open prairie.

About two miles from the town is situated the Bishop of Qu'appelle's College Farm. The Bishop, who was formerly Rector of Woolwich, is the brother of the present Lord Lichfield and of the Dowager Lady Vernon. The college farm, which comprises 640 acres, was purchased in 1884, the cost of the land, college, and farm buildings having been defrayed by voluntary subscriptions received through the Bishop's friends in England, one anonymous donor having subscribed the liberal sum of £1,000. The Bishop intends to make the college farm his headquarters, but, as his diocese is equal in size to the whole of England, much of his time will be spent in travelling. The object of this farm is to supply a serious want. Young men arrive from England to fill the offices of clergymen and missionaries without any previous knowledge or training in farming. The Bishop very rightly considers that, in a region so sparsely peopled, the duties of a clergyman would require only a portion of his time, and that if he possessed a knowledge of farming he would be usefully and profitably occupied, and would get on all the better with his neighbours, as having on this account more in common with them. Already the house is full, and enlargements are contemplated. The following extracts from the Bishop's circular will show the objects of the farm: "(1) As a place of religious and useful education for candidates for holy orders. The course of theological study will last three years. Students will be expected also to work on the farm during that time. (2) As a temporary home for young settlers on their first arrival in the country, who will receive instruction in the working of farms, and pay £50 for their maintenance for a year. (3) Besides the above a certain number of young men would be received who would give their work on the farm free, and thus, besides earning their own livelihood, be the means of providing by their labours a reverence for the Church's work. As one great object of the farm is to help the work of the Church in the diocese, all connected with it must employ a definite portion of their time in some useful occupation in aid of that object. No member of the body is at liberty to consider any portion of his time as his own, excepting such intervals of relaxation as are allowed by the rules of the house. The hours of study (for students) and all other employments will be fixed by the Visitor and Principal." It is also the good Bishop's intention to establish a high-class school in connection with the college.

About three miles to the north-west of the College Farm are the headquarters of the Edgeley Farm, the property of members of the Sykes family, of Edgeley, near

Stockport, England. This farm, unlike the Bell Farm, is not in a solid block, but consists of the alternate square miles, the intervening ones being owned and farmed by settlers from Ontario and Eastern Canada. The quality and situation of the land is such that the Government sections were all occupied prior to the Government survey. The following description is extracted from the report of the Government, published by the authority of the Hon. D. L. Macpherson, K.C.M.G., Minister of the Interior: "Range XV., Township No. 19, is high, dry, prairie. Soil—a rich clay loam, in some places gravelly, and here and there granite boulders may be met with near the surface. This township, considering the quality of the land and its facilities for railway communication (being only three and one-half miles from the main line of the C.P.R.), may be considered one of the most favourably situated for settlement in the North-west. All the even-numbered sections, at the time of the survey, were occupied by squatters, who had built small log-houses and made numerous other improvements. The southern tier of sections in this township is dotted with numerous groves of poplar, which will for some little time furnish a fair supply of fuel to the incoming settler. The remainder of the township is almost destitute of wood."

There is a post office at the Edgeley Farm, where letters are delivered three times a week. The farm is under the management of Mr. W. C. Cameron, formerly of Loch Broom, Ross-shire, who gladly supplies information to all new comers who apply to him. The owners have already cultivated about 3,000 acres of their large tract, which extends for twelve miles from east to west and six miles from north to south. It is their intention to sell off their land by degrees. One of the attractions of the Edgeley Farm consists of the steam ploughing and cultivating tackle, manufactured by Messrs. John Fowler and Co., of Leeds, and imported by Mr. Sykes in 1883. As this is the only steam ploughing tackle in use in Canada it has excited much curiosity. The farm has been visited by several members of the Canadian Ministry, and men of note and distinction both from Canada and England. Sir John Lister Kaye, of Denby Grange, in Yorkshire, who visited the Edgeley Farm in 1884, was so well satisfied with his inspection that he purchased 6,000 acres directly south of the more westerly portion of it, and adjoining Balgonie Station. Last year (1885) he commenced improvements on a large scale.

About twelve miles north-east of the Edgeley Farm is situated Fort Qu'appelle, which in his admirable work, "Canadian Pictures," the Marquis of Lorne designates as "the charming village of Qu'appelle." It has long been a favourite camping ground for the Indians, and was selected 18 years ago by the Hudson Bay Company for a trading station. The village is bounded on the east and on the west by large lakes, well stocked with excellent fish. It is sheltered on the north and on the south by well-wooded hills about 300ft. in height. It contains several stores, a flour mill, where grinding is done for farmers and others, a post and telegraph office, and an excellent hotel. It boasts of three doctors, a Church of England clergyman (the Rev. D. Lewis), two barristers, and one solicitor.

NEW EUROPE—ROUMANIA, SERVIA, BULGARIA.*

By the Rev. L. C. CASARTELLI, M.A., Ph.D.

Delivered before the Members in the Library, December 16th, 1885.]

I.

WARS have been wittily, as well as wisely, said to be useful for one purpose, viz., to teach us Geography. Wars, however, do more than teach Geography. Just as Napoleon professed to make History, so wars make Geography. Had it not been for the late Russo-Turkish war of 1877, the chapter of Geography to which I propose to ask your attention this evening would never have been written. Since the time that the Turks—a race at once fanatical (as Mohammedans) and barbarous (as Tartars)—first over-ran the south-east of Europe, Europe has heard little or nothing of the various peoples who inhabit those regions, or of the character of those regions themselves. Practically, though within easy distance of London and Paris, and almost on speaking terms with Vienna, they have been farther away from us than India or China. Every boy in our elementary schools knows the Ganges and the Indus, the Ghâts and the Himâlayas, Calcutta and Madras; or can tell of the bore of the Yang-tse-Kiang, and the Great Wall; or can find Canton, Peking, and Hong-Kong. But if the Danube were known at all, the Save and the Maritza were names unheard of, the Balkans were a geographical expression, and Belgrade, Sofia, or Cettigne were towns in Cloud-cuckoo-land. We knew that Chinamen wore pigtails and talked in monosyllables, but who or what were Serbs, and Bulgars, and Roumans, and what manner of speech they spoke, no man ventured to be dogmatic about. But *nous avons*—or rather, "to give the devil his due,"—*la guerre a changé tout cela.* Our maps have been reconstructed and recoloured, as is the one before you to-night; our elementary text-books have been re-written; and although Whitaker's omniscient Almanack for 1884 did not yet seem to have quite learnt that Wallachia and Moldavia, whose trade it sagely marked as *nil*, had become transformed into the kingdom (no less) of Roumania, with a foreign trade of £3,000,000 a year,† yet the four new Balkan States duly appear in the roll-call of foreign, and I am glad to say friendly, countries. Four *new* states I have called them, yet they are not so much new states as old nations revived, after a long, sad sleep, a lethargy like death, in the asphyxiating embrace of Ottoman tyranny, oppression, and indolence. And who, or what, has been the Prince Bountiful who, by his magic kiss and touch, has wakened to new life these sleeping beauties? That magician was no "Divine Figure from the North," but the Berlin Treaty of 1878. I would now ask your attention for a short time to the physical features represented on the map.

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* See Map of "Danube Peninsula."

† See Whitaker, 1884, p. 396 (amended, however in 1885).

II.—PHYSICAL FEATURES.

You will, no doubt, have observed that Europe, like Asia, only on a far smaller scale, throws out three peninsulas to the south, dividing into as many parts the Mediterranean Sea, as those of Arabia, India, and Indo-China similarly divide the Indian Ocean. These three peninsulas of South Europe, differing greatly in shape and size, are Spain, Italy, and the so-called Balkan peninsula. Each of these three peninsulas has one feature alike—the possession of a double mountain system, opening out, angle-like, to the east, and embracing a region of plain, more or less extensive, drained by an important river. In the centre peninsula the angle is formed by the Alps and the Appenines, and the great flat plain so enclosed is drained by Italy's most important river, the Po. In Spain, the angle formed by the Pyrenees and the Sierras of Castille and central Spain, contains a much narrower plain, drained by the Ebro, which river has caused the whole peninsula to be styled the Iberian peninsula.

A glance at the map will now show us, in the easternmost of the three peninsulas, a vast southern mountain system, formed of the Balkans and allied chains, which towards the Adriatic coast join hands with the Dinaric Alps, and on the north the great *massif* of the Carpathians. Between these two systems lie the vast plains—at one spot cut into two by the approaching mountain masses at the Iron Gates—which are drained by the mighty Danube. It would seem, therefore, that, for uniformity's sake, we might call this third peninsula the Istrian peninsula, from the Latin name of the Lower Danube, "Ister," just as we speak of the Iberian peninsula to the west. As a matter of fact, the Danube is a vastly more important geographical factor in this peninsula than is the Ebro in Spain.

Flowing down southward from Buda-Pesth, the capital of Hungary, whence it has arrived from the west, after leaving the beautiful city of Vienna, the Danube joins the Save, or Sau, at an important and interesting spot, where Belgrade, the capital of Servia, stands at the very borders of that kingdom and Austria. From this point the Danube takes up the borderline of Servia (hitherto carried by the Sau), and continues it till it is joined by the small river Timok, a little north of Widdin. Before this, it receives the Morava, with its comparatively broad valley, cutting Servia into two unequal parts. At the junction of the Timok, the three modern states of Servia, Roumania, and Bulgaria meet at a point, and from this point forward the Danube becomes the boundary between Roumania and Bulgaria. But a little beyond Silistria, the Danube suddenly bends upwards and northwards, leaving the Bulgaro-Roumanian boundary to be finished by a slanting line to the sea, whilst the great river itself goes northward to meet the Sereth and the Pruth (the latter the boundary between Russia and Northern Roumania), and all three rivers then make eastward for their common delta on the Black Sea. The Danube has thus, by means of the above-named tributaries, besides a large number of less important ones, drained the slopes of the Carpathians to its north and of the Balkans to its south. These latter mountains are also drained on their opposite or southern slope into the Ægean Sea, by several rivers, one of which, the Maritza, with its wide valley, is of importance, having on its banks not only Adrianople but also the capital of Eastern Roumelia, Philippopolis or Felibe.

I think these few preliminary facts will serve to give a general idea of the condition of the Balkan or Danube peninsula. I will only add a few dimensions of interest. The greatest width of the peninsula, from the head of the Adriatic, near Trieste, to the Danube delta, is about 16° (*i.e.* 14° E. to nearly 30°) along the line 45° of N. lat., or about as far as from the same spot (Trieste) to the estuary of the Gironde, in France, on the same parallel. This width dwindles down to about 10°, from Constantinople to Durazzo, on the Adriatic coast. The length between these two parallels will give us about 5° N. to S. South of this, however, the Danube peninsula throws off a smaller peninsula, whose backbone is the Pindus range, embracing the countries known as Albania, part of Macedonia, and Hellas; and this again throws off the still smaller peninsula of the Morea, or Southern Greece.

It will perhaps be understood that we are not concerned with these latter regions, but with those to the west or south-west of the Danube peninsula. To define the area in question, I may at once make use of the political divisions, and say it is limited to the new states of Roumania, Servia, Bulgaria, and Eastern Roumelia.

III.—ETHNOGRAPHY.

I have called this region "New Europe," because, as members of the European family of states, the whole four date merely from the days of the Berlin Treaty. Yet in one equally true sense we may call them "Old Europe," or even "Oldest Europe," for it is probable that this same Danube-Balkan land was the very first part of Europe occupied by these Aryan or Indo-Germanic races, of which Europe is now the proper and almost exclusive home.

Indeed the results of recent ethnographical research incline to the conclusion that nearly all, if not all, the Aryan migrations into Europe passed over and through this peninsula. Not only so, but as tribe after tribe of these Aryan immigrants, crossing probably by the north of the Black Sea, made their way slowly along both banks of the Danube, they also settled for a greater or less time in these regions, until driven further on, in their progress northward or southward, by succeeding waves of immigration. And so it comes to pass that many of these tribes have left, as it were, samples of their earlier types, at least in the case of the Italians, the Greco-Pelasgians, and the Slavs, who are apparently represented at the present day by the substrata of the Roumanians, the Albanians, and the Serbs respectively. As regards the Bulgarians, the tendency is to look for their origin rather in the Ural-Altaic family (to which the Turks also belong) rather than in the Aryan family. The subject of the ethnography of these races seems to be of sufficient interest to ask your patience for a few moments, during which I propose to turn to what we know of the Danube peninsula in ancient history.

If we look at a classical map we shall find that the region stretching north of the Ister or Lower Danube, and extending westward along the north shore of the Euxine up to the mouth of the Borysthenes (or modern Dnieper), was denominated by the title of Dacia, or land of the Dacians. South of the Danube and up to the Haemus mountains (the modern Balkans), was the land called Moesia, whilst the region lying between the Haemus on the north and the sea on the south was divided between Thrace on the east and Macedonia on the west—the range of the Rhodope (modern Despoto Dagh) running between the two.

The names of the Dacians and the Thracians are very familiar to us in the whole course of ancient history; and few peoples meet us oftener in the pages of the classical writers, whether Greek or Latin, from Herodotus to Pliny. Yet up to very recently, our ideas about them, their origin, their ethnological place in history, and their mutual relations, have been as misty as were the popular ideas concerning the modern inhabitants of the same countries. But strangely enough—or perhaps, by a natural consequence—in proportion as the modern Roumanians, and Bulgarians, and Servians, have been entering during the past few years into the light of European civilisation and knowledge, so the earliest beginnings of their remote prototypes, the Thracians and Dacians, have been getting cleared up, thanks to Oriental research. It would be a very attractive undertaking to enter here into some considerable detail regarding these researches, but I must content myself with merely summarising, in very brief form, the results of the labours of writers like Léon de Rosny and Tomaschek, and also M. Van den Gheyn, already known to this Society by the communication of several of his interesting ethnographical studies.*

It is apparently agreed that the Dacians and the Thracians were kindred peoples, or rather diverging branches of one and the same race. It is also agreed that they were Aryans, or Indo-Europeans, and that at an early date they migrated from Asia into Europe. In the words of M. Lenormant:—

> "We have demonstrated the existence of a great branch of the Aryan family which migrated from the common cradle of the race, just like most of the European peoples, by the immense plains to the north of the Caspian and Euxine Seas, and descended first of all into the lower basin of the Danube and European Thrace; and then, from this position, pushed on one division of its hordes into the west and north of Asia Minor, sending them across the Bosphorus and the Hellespont, by a reflex movement from west to east, which continued until some of these tribes had made their way into Armenia. To this great ethnic branch belong, in Europe, the Greeks and the Thracians, perhaps also the Illyrians; and in Asia Minor the groups of peoples whom the ancients themselves called 'the Thracians of Asia,' Bithynians, Mariandynians, and Paphlagonians; likewise the Phrygians and the Armenians properly so called." †

Considerable interest, for various reasons, attaches to the tribes dwelling on the coasts of the Black Sea. It was on these coasts, near the slopes of the Haemus or Balkans, that dwelt, according to the legend preserved by Pliny, the race of the Pigmies, routed in their memorable war with the Cranes. Further to the north the poet Ovid passed his exile at Tomi, the modern Kustendji, in the Dobrudja, and here he composed his "Tristia" and "Pontic Epistles." Nor has the poet's memory died out, for in Bessarabia, the land just beyond the Pruth and outside the boundaries of the modern Roumania, there is still an Ovid's lake—Lakul Ovidului; and in the Bukovina an Ovid's mountain—Ovidova Gora.

One may here ask the question, to what branch of the Aryian family did these Thracians and Dacians belong? Here we find ourselves face to face with one of the most disputed questions of ethnology. No less than six different theories have been put forward, and still find learned and warm defenders, for some writers claim them as Keltic, others as Greek, others as Slav, others, finally, as Germans, ancestors of the Franks and Goths.‡

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* See *Journal*, vol. I., p. 126. † *Origines de l'Histoire* II., 378. ‡ See controversy between Karl Blind and Dr. John Evans in *Academy*, 1884.

The last theory that I shall mention, and the one which at present commends itself most to my judgment—though I cannot here attempt to demonstrate it—sees in these peoples Eranians, that is to say, races akin to the Persians and Armenians, and other peoples of the ancient Eran, or Persian Empire. The arguments from philology seem to me particularly to tend to confirm this view. The most authoritative exponents of this theory have recently been Van den Gheyn and above all Tomaschek, of Gratz.

Of course it will be understood that the various races which now inhabit the Danube peninsula—Roumanians, Servians, Bulgarians, and the rest—are not by any means the pure and unmixed descendants of the original Thracians and Dacians. Wave after wave of successive invaders and settlers have passed over, Slavs and Tartars principally, and the profoundest changes have taken place both in race, character, and in language. Thus the Roumanians are the result of the fusion, as we shall see later on, of a great quantity of Roman blood with the original Dacian element, so that they form at present, for all practical purposes, one of the Latin peoples. The Servians have become in character and language Slavonic. Their neighbours, the Bulgarians, in whom, as in the adjoining Russians, there is a preponderating strain or Tartar element, have similarly become Slavonised; but the substratum which underlies all these populations would still appear to be that important and once most numerous race known to the ancients under the names of Thracians and Dacians.

I may quote on this subject the following *résumé* from a valuable and instructive article in a recent number of the *Dublin Review*, by Miss E. M. Clerke:—

> Drawn gradually southward to fill the void created by barbarian forays among the Moeso-Thracian peoples, the Slavs colonised the whole Balkan peninsula outside Greece, and later formed a solid wedge across Central Europe, from the Baltic to the Illyrian shores of the Adriatic, limiting with comparative definiteness the easterly range of the Teuton.
>
> The slow tide of Slavonian advance was partially overwhelmed and thrust aside by the portentous havoc-crested billow of Turanian invasion, launched in successive breakers of barbarism on the frontiers of civilisation from the heart of Asiatic deserts. . . . It was in 681 A.D. that the Bulgarians permanently established themselves in Moesia on the south bank of the Danube, where they rapidly merged their language, and, to some extent, their nationality, in those of the conquered people. Their intrusion has, nevertheless, caused the broad line of demarcation existing to the present day between Serv and Bulgar, the types respectively of the western and eastern branches of the Southern Slavonians. The latter, who may perhaps be ethnologically defined as Ugro-Slavs, have shown a wonderful tenacity in retaining their national cohesion and identity, surviving almost unchanged in their ancient territory, after several terms of subjugation by the two great empires successively seated on the Bosphorus.*

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* *Dublin Review*, Jan., 1886, "The Slav States of the Balkans."

After these details of ancient history, it is high time that we turned to the question directly before us—the modern condition of the Balkan States. In order to treat the subject more satisfactorily, I shall have to take the three principal States separately, and endeavour to collect what information I can upon each.

IV.—KINGDOM OF ROUMANIA.

I have to express my sense of the courtesy of his Worship the Mayor of Manchester, Mr. Alderman Goldschmidt, who is Consul for Roumania in this city, and who has been so kind as to place at my disposal a very valuable work by Dr. Joseph Dulberg, entitled *The Roumanian Code of Commerce, translated from the Original, and preceded by an Introduction on Roumania and her Commerce* (Manchester, Lingl and Co., 1884), from which I have been able to cull a large amount of information.*

Roumania, which forms a kind of crescent or inverted L, consists of the rich plain lying between the Carpathians and the rivers Danube and Pruth to its south and east, together with the land known as the Dobrudja, lying on the coast to the south of the Danube delta. The land rises gradually from the two rivers up to the Carpathians, which reach their highest point in Ciahlău or Pion, 8,900 feet.

The area is not quite 50,000 square miles, or about 1⅕th less than that of England, whilst the population is only about 5,376,000, or about that of London—giving an average of about 107·5 to the square mile, and making it the twelfth country in Europe in density. Of the people 87·7 per cent are Roumanians, and of the remainder 400,000 are Jews and 200,000 are Gipsies. I may here remind you that our Gipsies still call themselves Romaney. The reason is that this curious Hindu tribe first entered Europe through Roumania, where they probably were settled for a considerable time, as is shown also by the number of Roumanian words absorbed into their language.

In the matter of climate Roumania suffers from long and severe winters, whilst the summers are very hot. Dr. Dulberg mentions that the thermometer sometimes falls as low as 28° F., or 60° of frost, whilst in summer it rises to 99°. And whilst the rainfall is somewhat less than ours, the country suffers occasionally from severe winds blowing from N.E. or S.W.

A glance at the map will show that few countries are more richly watered. The great artery is, of course, the mighty Danube, which, entering by the famous Iron Gates, eventually flows into the Black Sea by three mouths, the Kilia, Sulina, and St. George, of which the Sulina is the most important. All along its course the Danube receives innumerable tributaries, so that it is no wonder that it is a land of extraordinary natural fertility—indeed, were it not for extremes of climate it would probably be the richest soil in Europe. As it is, its productivity ranks high in the scale of nations, as may be seen by the following details of productions.

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* An equally large proportion of my statistics is due to Brachelli and other authorities.

The average crop of all grains is about three million tons, or 563 per inhabitant, making Roumania the third country in Europe. The chief crops are maize, about 69 million bushels, of somewhat under £6,000,000 value. This forms the chief food of the peasantry, who make from it a kind of cake called *mamaliga.* Of wheat, 32 million bushels are produced (value about £8,800,000). I need say nothing of rye, barley, and other grains, but will add that in 1881 about 700,000 tons of grain were exported, of which a very large amount (to the value of £2,750,000) was sent to the United Kingdom.

Roumania produces good wine, especially at the foot of the Carpathians, to the amount of something like 22,000,000 gallons per year, of a value of under £2,000,000. The Belgian Consul at Bucharest, M. Jooris, says, in his report for 1880, that wine has begun to be exported to Hungary, Bulgaria, and Turkey, and also for the first time to France.

The amount of pasturage is 28,000 square kilometers, or about three-quarters of that of Ireland. Hence we can understand that cattle will be abundant, as the following table shows:

	In round numbers.	Per 1,000 of Population.	Compared with U.K.
Horses ……	500,000	85	Same
Horned cattle	2,000,000	372	Higher
Sheep………	3,500,000	700	Less
Pigs … ……	800,000	167	Higher

I may remark that in 1881, the amount of wool exported was 37,000 cwt. The mineral production, on the contrary, is slight, not that Roumania does not possess great mineral wealth, but that it is comparatively undeveloped. The sole exceptions are salt and petroleum. Of salt, some 80,000 tons are produced, and the salt of the Carpathians has the reputation of being the best quality in the world. The most recent authority on petroleum (M. Hue, in his work *Le Pétrole,* 1885) credits Roumania with 1,200 wells and a production of 125,000 barrels per year, equivalent to 4,400,000 gallons.

It may be well, at this point, to say a word about the present people of Roumania. Roumania, indeed, differs from all the other provinces in its people. They are called "Roumanians," or as they style themselves "Roumans," *i.e.,* Romans. In the days of the Roman Empire this plain formed part of the province of

Dacia. The Emperor Trajan settled a large number of Roman soldiers and other colonists amid the Dacian population. The result is that in the Roumans we have a partially Roman race, mingled, as we have seen, with "barbarian" elements. The language is yet so very like Italian that any person knowing Italian can make out a Rouman book or paper with ease; and even the grammar is singularly close to the Italian.

Here are a few common words by way of illustration :—

	ROUMAN.		ITALIAN.	
	Sing.	Pl.	Sing.	Pl.
Man	om	omeni	uomo	uomini
Brother ...	frate	frati	frate	frati
Sister	sora	sori	suora	suore
King.........	rege	regi	re	re
Queen	regina	regine	reina	reine
Cow	vaca	vaci	vacca	vacche
Horse	cal	cai	cavallo	cavalli
Fish	peste	pesti	pesce	pesci
Apple	pom	pomi	pomo	pomi
Bread	pane	pani	pane	pani
House	cassa	casse	casa	case
Star	sté	stelle	stella	stelle
Name	nume	numeni	nome	nomi (L. nomina)

Or again look at these parallels :—

	ROUMAN.	ITALIAN.
My dog...............	al meŭ căne	il mio cane
My dogs	ai meĭ cănĭ	i miei cani
My house	a mea cassă	la mia casa
My houses	ale mele casse	le mie case

Or at these verbal forms :—

TO SLEEP.

ROUMAN. A DORMI.	ITALIAN. DORMIR.
Present :—	Present :—
Eu dorm	io dormo
Tu dormĭ	tu dormi
El dórme	egli dorme
Noi dormim	noi dormiamo
Voĭ dormiti	voi dormite
Eĭ dorm	eglino dormono

ROUMAN. A DORMI.	ITALIAN. DORMIR.
Imperfect :—	Imperfect :—
Eu dormiam	io dormiva
Tu dormiai	tu dormivi
El dormia	egli dormiva
Noi dormiam	noi dormivamo
Voi dormiati	voi dormivate
Ei dormiaŭ	eglino dormivano

It is a natural transition to pass from the ethnology and language of a people to their religions and educational condition. Regarding religion, 4,790,000, or 89 per cent of the entire population, belong to the Eastern Greek Church. Of the other religions, the Jews, as we have seen, are most numerous, mustering 400,000; after whom come the Catholics, 115,000; Mohammedans, 30,000; Protestants, 15,000; Armenians, 10,000. Both the Greek and Catholic Churches have a full hierarchical system.* It is a remarkable fact that whilst the State religion is Greek, the king himself is a Latin Catholic. The following table gives a *resumé* of the state of public education, which since 1864 has been obligatory, and is gratuitous. As regards denominational education, my only figures relate to the Catholic Archidiocese of Bucharest, which contained in 1883 twenty-six schools for boys and girls, with 2,249 pupils. The table is taken from Brachelli :—

I.—PRIMARY.	Schools.	Pupils.	Per 1,000 inhabitants.
School Age. 6-13	2,730	120,000	22
Training Schools —	9	773	—

II.—MIDDLE.	No.	Pupils.	Teachers.
Course Lasts.			
Lycées .... 7 years	7	2,108	160
Gymnasia ...... 4 „	19	2,077	180
Ecclesiastical Seminaries... 9 „	—	1,512	99
		5,697	439

—HIGHER.—Universities.	Professors.	Students.
Bucharest	48	527
Jassy	39	160
	87	693

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* Greek : one metropolitan (Bucharest), one archbishop, six bishops, 7,000 secular priests, 1,350 monks, 2,600 nuns. Catholic : one archbishop (Bucharest) and one bishop.

Very large numbers of young Roumans are also to be found at Universities abroad, especially those of Paris, Ghent, and Germany. To the above Dr. Dulberg adds the agricultural school, two academies for music and the arts, one engineering school, one veterinary college, one school of pharmacy, and three military colleges.

Literature and sciences are represented by several societies, the chief being the Academia Romănă, and also, I am glad to say, the Societatea Geografică Romănă, whose name I have not yet seen in the list of our Corresponding Societies, where I certainly think it ought to find a place.

Dr. Dulberg also describes the periodical literature as abundant, every town having its local papers, and specially refers to the literary review, Convorbiri Literare (or "Literary Conversations") issued by the society called Junimea.

The following tables refer to the trade and commerce of this country:—

TRADE ACCORDING TO ARTICLES.

Imports.	£ Million.	Exports.	£ Million.
Textile Stuffs and Wares	3½	Corn and Flour ...	7·9
Metals and Wares..	2	Cattle	under ½
Hides and Leather	1½	Timber	„ ¼
Wood	½	Leather..............	„ ¼
Colonial Products, Fruit, &c..........	½	Manufactured Goods	„ ¾
Glass and Pottery.	¼		

TRADE ACCORDING TO COUNTRIES (1882).
(FROM DULBERG.)

Imports.	£ Million.	Exports.	£ Million.
Austro-Hungary ...	5·4	Great Britain	3·9
Great Britain	1·8	Austro-Hungary ...	3
Germany	1·2	France	1·7
France	·92	Turkey, &c.	·7
Turkey, &c.........	·57	Germany	·22

The last table is very instructive, for it shows us that whilst in imports we come in a bad second to Austria—and are even going back in this respect—we have risen since 1875 from being fifth in the scale of Roumania's customers to far and away head the list.

Intimately connected with the question of foreign trade is that of the navigation of the great waterway, the Danube, and its chief ports:—

1880 (DULBERG).

Ports.	Entered.		Cleared.	
	Vessels.	Tonnage.	Vessels.	Tonnage.
Sulina	5,572	1,335,830	5,542	1,339,460
Galatz	5,473	461,621	5,516	631,635
Braila	3,317	676,608	2,524	602,325
Total............	19,875	2,969,848	18,564	3,174,131

These figures are all the more interesting to us when we remember that some two-thirds of the entire Danube trade is carried under the British flag, Thus in 1882:—

	Steamers.	Tonnage.	Sailing Vessels.	Tonnage.	Total Vessels	Tonnage.
Total...............	842	786,436	804	116,627	1,646	903,063
Great Britain ...	580	607,219	3	1,224	583	608,433
Per cent	68·8	78	...	...	35	67·3

We see that whilst our share of the sailing-vessel trade is practically *nil*, yet so great is the preponderance of British steamers (68·8 per cent of the whole), and still more so of their tonnage (78 per cent), that in the general result we have over 67 per cent of the total tonnage of all kinds of vessels united.

Particulars regarding railways, posts, and telegraphs are summed up in the following tables:—

Railways ...	Miles.	Carried in 1880.	
	914	1 million persons.	Over 1 mill. tons of goods.
Posts	Offices.	Carried in 1882.	
	179	15½ mill. letters & papers.	Nearly ½ mill. parcels.
Telegraphs...	Miles.	Transmitted in 1882.	
	2,865	Nearly 1¼ mill. messages.	

As regards the industries, so far little effort seems to have been made. What industry there is is mostly limited to flour mills, match mills, sugar mills, soapworks, sawmills, a paper mill, and a cloth mill; for the chief occupation of the people, after all, is agriculture, the soil being almost entirely productive.

The kingdom of Roumania is divided, both naturally and for administrative purposes, into three provinces—Moldavia, lying beyond the Sereth and adjoining Russia; Wallachia, the great plain between the Sereth and the Danube; and the Dobrudja, at the Danube mouth. Roumania came off comparatively badly at the Berlin Congress in 1878, for in exchange for a portion of Bessarabia, mostly inhabited by Roumans (which Russia kept for herself), she was forced to accept this same Dobrudja—not a very desirable territory (though it is capable of being rendered one of the best wheat-producing countries of Europe), and also inhabited to a large extent by Bulgarians and other non-Roumanians.

Of the towns, we need only allude to one or two:—

Bucuresci (Bucharest), the capital, with 222,000 inhabitants, is situated on a small tributary of the Danube, about 40 miles north of the great river. Of course it is in every way the chief city, whether from governmental, educational, or financial points of view.

The former capital of Moldavia, Jasi (Jassy), is the second city of the kingdom, with 100,000 inhabitants. It is built on a tributary of the Pruth. It has very considerable inports, principally, we are told, Manchester goods.

Galatz (80,000 inhabitants) ranks as the greatest port and chief commercial city of Roumania. Here the foreign consuls reside, and here the International Danube Commission—representing Roumania and the seven Powers—has its seat, and is independent of the Roumanian Government.

Perhaps the small town of Kustendje (the port on the Black Sea—the Tomi of Ovid's exile) is destined to have an important future, as its sea trade increases and its inland traffic by railway develops.

I shall not detain you with speaking of the army, or the system of conscription (over the age of 21), nor the small navy, but will add a word on the constitution. For long vassal states of Turkey, Moldavia and Wallachia were united under a "Hospodar." In 1866 this post was assigned to Prince Charles of Hohenzollern, who, on the establishment of Roumanian independence by the Treaty of Berlin, July 13th, 1878, became Prince of Roumania, and on March 26, 1881, was proclaimed king, being crowned on May 22, of the same year. The kingdom is a constitutional monarchy, hereditary in the male line only. In 1869, Charles married the Princess Elizabeth of Wied, who is well known in the German literary world as a charming poetess, writing under the *nom de plume* of "Carmen Sylva." The National Assembly consists of two houses—a senate with 70 and a chamber of deputies with 145 members. The responsible ministry is limited to 7. The code of justice is based on the Code Napoléon, with some modifications; capital punishment, for instance, is abolished. The commercial code, as already remarked, has been translated into English, and published by Dr. Dulberg in this city. Roumania is represented in England by a minister-plenipotentiary (Prince John Ghica), a consul-general in London, and a consul (Ald. Goldschmidt) in our city. We may look upon the new kingdom as in a prosperous state, for in 1883-4 the revenue exactly balanced the expenditure (under £5,000,000); and whilst the national debt is £27,750,000, of this by far the greater part, £18,000,000, is expenditure for railways. I may add, the Roumanians, like the other Balkan states, have been wise enough to adopt the French system of money and measures, only that the franc bears the name of *leu* and is divided into 100 *bani*. It is interesting to remark that a commercial treaty with Moldavia was made as early as the days of Queen Elizabeth, in 1588, by Wm. Harebone, who negotiated it with Prince Peter VII. An April 5, 1880, the present treaty of commerce (translated in full in Dr. Dulberg's book) was made between the United Kingdom and Roumania, being signed by Mr. (now Sir W.) White and the Roumanian minister. The chief points were (*a*) A reduction of 33 per cent on the duty on hard Manchester yarn; and (*b*) a clause giving to English subjects the same rights of buying, holding, and selling all kinds of real estate as Austrians already possessed—this, of course, being reciprocal for Roumanian subjects in British territory.

V.—KINGDOM OF SERVIA.

This kingdom, whose name has been more familiar to us than the preceding one for some months past, differs almost in every way from the one we have just left. It is a mountainous mass lying S. of the Danube, which separates it from Hungary, divided from Bosnia by a river called Dvina to the W., and by artificial boundaries from Bulgaria on its E., and Albania on its S. In area it is almost exactly one-third of Roumania (19,000 square miles), and its whole population is under 2,000,000. The only breaks of importance in this vast mass of rock are the wide valley of the Morava, which traverses it from N. to S., and the smaller one of the Servian Morava, which (flowing W. to E.) joins the greater river at its middle. The mountains of Servia are covered with dense and rich forests, chiefly of oak, which feed the innumerable herds of swine for which Servia is proverbial. The figure of the country is that of a trapezium, whose base and two parallel sides are formed by watercourses. The aspect is very accidented and picturesque, but the numerous rivers are little suited for navigation. The climate is healthy, and like that of southern France, but the cold of winter is extreme.

The Serbs, a Slav people, and therefore of an altogether different race to the Roumans, have unfortunately developed, since their independence, rather a spirit of rest than of work. Thus agriculture is very seriously neglected.

The social customs are decidedly patriarchial, and are interesting to those who occupy themselves with questions of land proprietorship. There is a curious social unit called Zadruga* (*za* = with + *druga* = another), a clan made up of the families of the father, as patriarch, and those of his married children and grandchildren. All live in a common enclosure, and possess equal rights over the property they cultivate. When a Zadruga is dissolved the land is divided according to the number of male persons in the clan. The Zadruga, as a rule, lasts as long as the father is strong and active enough to rule and manage it; but generally lasts longer in the case of small estates, as there are the more advantages in being united. Moreover, the Serb law favours this continuance, by assuring to each head of the Zadruga who pays taxes, a piece of land of five acres and an ox, which can be neither alienated nor hypothecated for debt. This privilege has a conservative tendency, guaranteeing the members of the Zadruga to some extent from the accidents of fortune. Its dark side is that it tends to check individual efforts and progress.

A curious characteristic of your Serb peasant is that he is as proud as Lucifer, so proud that he disdains to hire out his service or time for agricultural labour. When a farmer is short of hands to get in his crops, he knocks at his neighbour's door, and not in vain. At the fixed day, his neighbour, with all his family, who remain two or three days the guest of the farmer, come and work regularly at his crops, and take no pay at all, but, of course, expect reciprocal service when the harvest week arrives in their Zadruga.

So little ambition or desire for improvement has the Serb peasant, that he is content to cultivate only what is of absolute necessity for his food—maize, beans, garlic, onions, cabbages. Meat is unknown, potatoes a luxury, boiled sheep's brains a feast. Meanwhile the market of the capital, Belgrade, is stocked with vegetables and fruits imported from Austria, and sold at exorbitant prices, when they might be far better cultivated in the fields round the city. At the same time the methods of agriculture are of the most primitive—clumsy ploughs, drawn by two or three yoke of fine oxen, where a single horse would suffice, and the plough so badly made as scarce to scratch the earth. The Government has, however, made several attempts to introduce better implements by encouraging the establishment of manufactures. The ordinary cereals are produced—wheat, maize, rye, barley, and oats. Of these, by far the largest quantity of the wheat is exported (to the extent of some 18,000 or 19,000 tons); but the largest crop—that of maize—is almost entirely consumed at home. Fruit is largely grown and exported, above all *prunes* which for the last twenty years have been dried and exported to an enormous extent, between thirty-three and forty-four million pounds per year. Thus, M. Paranos, of Zabreche, himself exports yearly to America alone, *via* Trieste, 1,100 cases of dried prunes, at 154lb. per case, a total of some 155,000lb. At present the price ranges about £2 8s. per 100 okas (272lb), or about 1s. for 6lb. The other chief vegetable cultures are flax, hemp, and tobacco, though not in any great quantities. But *wine* is one of the sources of national wealth. The soil is very chalky, and this fact has led to excellent results in the recent attempts to develop the culture of the vine. Baron von Babo, director of the Œnological School of Klosterneuburg, near Vienna, writes: "The quality of these wines, which have so long been out of the way of trade, is in general excellent. They are distinguished by a highly-developed bouquet, especially the reds, and have not that earthy taste which so often spoils the *crûs* of Southern Austro-Hungary." And it may be added that several Servian wines took prizes at the exhibition of Bordeaux.

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* Lit., *μετ' ἀλλήλων*.

Another industry that will probably be largely carried on sooner or later in Servia is that of *silk*. It was a Belgian, Count de Mercy, who was governor of this region for Austria, 1717-39, that first introduced the silk culture; and the mulberry flourishes very well in the country.

If we turn to the live stock, our attention is first of all attracted by the vast herds of *pigs* which roam through the Servian forests. Servia possesses 1,679,000 swine, which is 1,000 per 1,000 inhabitants, the highest average in the world, as the United States of America, with their 35 millions of swine, can only boast of 673 per 1,000 inhabitants. The annual export is nearly 370,000, or ten times what we import into the United Kingdom. In the matter of sheep, too, Servia stands well, possessing about 3½ millions, or about 2,000 per 1,000 inhabitants, so as to again rank highest in Europe. The breed is also said to be very good. Goats in considerable quantity, and, among horned cattle, buffaloes, form important items of the animal wealth of the country.

Perhaps the most serious drawback to Servia is the want of roads, for during the centuries of Turkish domination even the good roads which existed were let go to ruin. Yet there was a time when Servia formed the great highway, the *trait d'union* as it has been called, between East and West. The great thoroughfare passed from Belgrade along the valley of the Morava, by Nissa, on to Constantinople. This great road was made by the Romans, under whose rule Servia formed the western part of the province of Mœsia. It was used time after time by the Roman legions, and in the Middle Ages by the Crusaders, and formed also the ordinary trade route between Hungary and Constantinople. But all this changed with the Turkish conquest, and now, not only are the roads bad, but the vehicles employed are simply miserable. For waterways, Servia is not much better off. Efforts have been made at different times to navigate the Morava, but without success. In 1867 the Danube Navigation Company took the matter up, but also failed in its attempt.

The only two navigable rivers are, therefore, the Danube on the N.E. boundary, and the Sau or Save on the N.W. One company serves these rivers, entitled the "Erste Kaiserlich-Königliche Privilegirte Donau-Dampfschifffahrtsgesellschaft." The growth of this company will be seen from the following data: 1834, first steamer started; 1836, second ditto; 1846, great development of traffic; 1864, twenty-nine steamers and one hundred and two tugs engaged. The Danube is the route for Servia's eastern trade with the Black Sea. The most serious obstacle it encounters is in the famous Iron Gates, at the meeting-point of Servia, Roumania, and Hungary. At this spot, too, Trajan's road crosses the river. The Sau, on the other hand, is the waterway which connects Servia, through Bosnia, with the ports of Trieste or Fiume on the Adriatic.

Servia had to be forced by the Berlin Congress to undertake her share in the making of the so-called International Line. The beginning was somewhat disastrous, for the undertaking was in the hands of the ill-starred Union Générale, which, it will be remembered, soon came to grief. When it is completed, it will cause an entire revolution in the overland traffic, by uniting Belgrade with Salonica, to which the opposition of Turkey has been withdrawn. The principal effects to be anticipated are the following: (1) It will absorb part of the traffic of Belgrade with Constantinople, now taken by the Danube. (2) It will absorb part of the traffic of the Austrian-Lloyd from Trieste. (3) It will open up an intimate communication with Bulgaria, Roumelia, and Turkey. (4) It will shorten the journey from London to Constantinople, including stoppages, to 75 hours.

Servia can scarcely be said to have any *manufactures*, if we except a certain amount of gold-work and filigree, but especially carpets and embroidery. The border town of Pirot, of which we have heard so much in the late unfortunate war, is famed all over the East for its carpets. These are made of red wool, and occupy 1,800 houses out of a total of only 2,000 The produce is estimated at 1,000 pieces per year, varying in price from £5 to £6,000 each.

With the above exception, therefore, Servia's exports are entirely agricultural—prunes, as we have seen above; wine (to France, Switzerland, Austria, Germany, and Roumania, especially the kind called *kraïna*), and two kinds of liqueurs called respectively *slibovitza*, made from prunes, and *komovitza*, made from the grape. The imports are mostly iron, glass, arms, rice, and starch. The greatest part of the trade is done with Austro-Hungary; for in 1881, out of 110 million pounds weight of imports no less than 77 millions, or three-fourths, came from that empire. It is stated that the only trade done with England is in Manchester goods to the extent of £400,000 a year, and that in Belgrade alone there are some twenty merchants engaged in this trade. But England would seem to be not sufficiently alive to her interests in the country, as I learn from the Belgian consular returns that large quantities of both English and Belgian goods are sold as German. In 1881 the exports and imports of Servia almost exactly balanced each other, being about £1,500,000. At the same time the public debt was £6,500,000, of which one-half was for the construction of the railways.

The following items regarding the population may be of interest: The density is about 80 per square mile, which places Servia thirteenth in the scale of European nations. On the other hand, Servia can boast of both the highest percentage of marriages in Europe (114 per 10,000) and the highest annual increase of population (2·27 per cent). The language of the country is thoroughly Slav, closely resembling Russian. In religion, too, no less than 94 per cent. belong to the Greek Church, the few remaining thousands being, Mohammedans, 15,000; Catholics, 5,000; Jews, 4,000; and Protestants, 500. I may here remark that, unlike Roumania, Servia does not allow freedom of religion. It was only last year that Mgr. Strossmayer, the energetic and patriotic bishop of Bosnia, in whose jurisdiction Servia also lies, obtained, by means of a personal interview with King Milan, permission for the opening of a Catholic church and school at Nissa, the ancient Naissus, on a tributary of the Morava, celebrated in history as the birthplace of Constantine the Great.*

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* It is only just to add that of late years Roumania also has most unfavourably distinguished herself by her persecution of the Jews (a *Judenhetze* more intense than that of Germany), in spite of the stipulations of the Berlin Treaty.

The state of education is represented in the following table:

I. Primary.	Schools.	Pupils.	Per 1,000 Inhabitants.
School Age. 6-12	660	38,500	22
II. Middle.	**No.**	**Pupils.**	**Teachers.**
Gymnasia Pro-Gymnasia Real-institute	3 18 4 } 25	4,000	243
III. Higher.		**Pupils.**	**Teachers.**
High School in Belgrade		168	28

In 1869, when Servia was still a vassal state of Turkey, the Skuptchina, or Parliament, was created by the constitution of that year. Prince Milan, of the family of Obrenovitch, who ruled at that time, became independent by the Berlin Treaty of 1878, when his territory was also increased; and in 1882 he was proclaimed king. At present the ordinary Skuptchina, which meets yearly at Belgrade, consists of 45 members nominated by the crown and 128 elected by the people. The so-called Greater Skuptchina is directly elected by the people, and is four times the size of the ordinary assembly. It is, however, convoked only on critical occasions, such as the election of a new sovereign or a change in the constitution.

VI.—PRINCIPALITY OF BULGARIA.

I have spoken at such length of the two youngest of the European kingdoms that I find I have hardly time or space left to devote to the principalities. The name of Bulgaria will be familiar to us all from the famous "Bulgarian Atrocities" of 1876-7, which served as the pretext for the Russo-Turkish war of 1877; and also from the recent and still smouldering deplorable war with its neighbour Servia. Bulgaria is the name of the country lying to the south of the Danube and to the north of the Balkans, together with the southward extension along both sides of the valley of the Ister on the west, which gives Bulgaria, like Roumania, the shape of an inverted L. It is in this portion of the country, dangerously near the Servian frontier, that the capital, Sofia, stands. The northern border, therefore, consists of the well-watered and fertile plain of the Danube, gradually rising southward into the region of the Balkans. The area is considerably greater than that of Servia, being about 27,500 square miles; but as the population is only about 1,800,000 the density does not exceed 61·2 per square mile. The soil of Bulgaria is one of the most fertile in Europe, and Bulgaria was long known as the granary of the Ottoman Empire. The annual produce of grain is about two million tons a year, or 1,800lb. per head of population, the highest average in Europe. The exports are: Wheat 125,000 tons, maize 120,000 tons, tobacco 1,150 tons. Mineral produce is not yet developed to any perceptible extent, and for the present pretty much the same must be said of manufactures. The entire trade is returned at about £3,500,000 per year.

We have already said there is a strong element of Tartar blood in the Bulgarian people, although they have become thoroughly Slavonised, and their language closely resembles those of Servia and Russia.

Having on pages 277-8 given a table showing the striking affinities between the Roumanian and Italian languages, I have thought it useful to make a similar list, showing by opposition the Slavonic character of the tongues of Servia and Bulgaria, which is best done by comparison with Russian. For this purpose I keep the same English words as before.

	RUSSIAN.	BULGARIAN.	SERVIAN.
Man	chelovyek; muzh	chelyek; mezh	chovek; muzh
Brother	brat	brat	brat
Sister	sestra	sestra	sestra
King	karol'	kral	kral'
Queen	tsaritsa	tsaritsa	tsaritsa
Cow	karova	krava	krava
Horse	kon'	kon	kon'
Fish	ryba	riba	riba
Apple	yabloko	yableka	yabuka
Bread	khléb	khléb	khleb
House	dom	dom	dom
Star	zvyezda	zvyezda	zvezda
Name	imya	imye	imye

From the accomplished geographical writer already quoted, I borrow the following interesting statement of the racial contrasts between the Bulgarians and Servians:—

> Although the Balkan peoples are nominally a homogeneous race, the national type of the Serb, ethnologically including Bosnians and Montenegrins, differs essentially

from that of the Bulgarian. This diversity, confirmatory of the view that the Turanian element still survives in the modern Bulgarian, corresponds to that between the Polish and Russian peasant, the Slavonic blood of the latter being also largely adulterated with a Tartar infusion. The Bulgarian is unquestionably the lower organisation—generally apathetic, yet capable of being roused to tigerish ferocity, he is at once more patient under oppression, and more savagely vindictive when triumphant, than his western neighbour. In externals there is the same superiority in favour of the purer race, for while the Ugro-Slav has the low brow and irregular facial outline suggestive of the animal type, the Servians are as a rule a straight-featured people, with a high average of good looks, though seldom, perhaps, passing into the finer perfection of ideal beauty. In national costume, too, diversity of origin is traceable, for while on the Lower Danube we find the sheepskin clothing, and heads close shaven save for a single lock of hair—universally distinctive of the Tartars—we meet a more picturesque style of dress, with brighter colours and greater attempt at decoration, among the dwellers by the Morava and the Save. The fez is the universal Servian headdress, both for men and women, while the use of coins as ornaments is so extensive among the latter that *three millions sterling* are said to be withdrawn from circulation in this way.*

In religion, moreover, there is a vast difference between Bulgaria and Servia, for of the population of the former no less than 30·7 per cent are Mohammedans and only 68·8 are Christians, and these almost exclusively of the Greek Church.

This Christianity, however, is of the most extraordinarily degraded kind. Thus, the Bulgarian Christians positively "cannot be made to believe in the immortality of the soul," as Padre Damiano, a Capuchin of Varna, stated to Mr. St. Clair *(Twelve Years' Study of the Eastern Question in Bulgaria, 1877).* "Devoid of this firm basis of religious belief, the nominal Christianity of the Bulgarian is largely intermingled with superstitions and observances handed down from his heathen ancestors. Among these are the sacrifice of animals in honour of certain of the saints, the offerings of food to the dead, the veneration of an icon or picture of a saint with a dog's head, and the belief in the vampire or resuscitated corpse. . . . The old Lithuanian worship of Spring, under the form of a serpent, is commemorated by the Blagostina, the Feast of Nature and of Serpents, kept on March 25th."† Witchcraft, the belief in fairies and forest fays, is universal, whilst "the observance of 183 church feasts is a serious check to industry, and the ordinance of 182 days of rigid abstinence on bread and vegetables must also tend to diminish the working power of the people."

The following table embodies what we know of the state of public education:—

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* Miss Clerke, *Dublin Review.* † Miss Clerke. (See *ante.*)

I.—PRIMARY.	No.	Pupils.	Per 1,000 Inhabitants.
Elementary Schools	1,432	92,500	66*
Training Schools	3	—	—

II.—MIDDLE.	No.	Pupils.	Teachers.
Lycées..........................	7	2,108	160
Gymnasia	19	2,077	180
Ecclesiastical Seminaries ...	9	1,512	99

* Much higher than Servia (22).

The present Government, established in 1878, is a constitutional principality, though still under the tutelage of Turkey. The parliamentary system is not unlike that of Servia, there being an ordinary and a greater Sobranje, both, however, directly elected.

VII.—CONCLUSION.

As we are probably on the eve of very important political changes in Bulgaria, I shall refrain from entering into further details on this subject. The same must be my excuse for not speaking of Eastern Roumelia, for until its ultimate fate is decided it can scarcely be said to have entered within the limits of my definition of "New Europe."

I may perhaps also be pardoned if I pass by with a mere mention the little principality of Cherna Gora or Montenegro, whose name, "Black Mountain," so well describes its wild and savage character. It is indeed now a free and independent state, very small indeed, for with an area of only 1,700 square miles, or much less than one-tenth of Servia, it has a population of little over a quarter of a million inhabitants. Moreover, the essentially military and still almost half-savage character of its population render it scarcely deserving as yet of being reckoned among the European nations. Its productions are limited to such necessary articles of culture as maize, potatoes, and tobacco. Industry scarcely exists, and commerce is practically *nil.* The tiny capital, Cettigne, with barely 1,400 people, is connected by a road with Cattaro, an Austrian port, and a few coasting vessels trade with the small Montenegrin ports of Antivari and Dulcigno. I think, therefore, we may fairly leave over the treatment of this little state to some time in the perhaps not far distant future when it shall have made more progress in the path of commerce and civilisation.

After reading through this mass of figures, I am not prepared to deny that my essay is a dry one. The subject is scarcely one that lends itself to a very exciting, or even interesting, mode of treatment. My object has been to gather as ample a set of statistics as I could with regard to these countries, so new and so little known to us, rather with a view of calling attention to them than of giving you many facts which I might reasonably expect you to carry away with you. It behoves us to know something of the new order of things that is slowly developing itself about us. It behoves especially a commercial community, like this in which we live, to keep eyes and ears open to all that may suggest the opening out of new markets for its produce, of new sources of food or raw materials, of new fields for its trade. And therefore it seems to me that Roumania, and Servia, and Bulgaria, at least—if not their tiny sister state—are deserving of some attention at the hands of Manchester. New railways and new ports open out new possibilities; the tasting of the products of civilisation engenders demand; and there is no reason why Bucharest, and Belgrade, and Sofia should not one day be sending us their agricultural produce in abundance, and receiving our cotton goods in return; there is no reason why these new lands should not supply a goodly share of that trade which is, I suppose, one day to make the future of our Ship Canal. But, in any case, it must be interesting to watch the rise and growth of young and new nationalities. The Rouman and the Slav have yet the world all before them, and who knows what is in store for them?

GEOGRAPHY AND POLITICS.

WAR in any country immediately produces a crop of maps in all the daily papers in the kingdom, and no doubt greatly enlarges the geographical knowledge of the readers. Politics may be used for geographical purposes also, but the only instance we remember where, during the late election, geographical lessons were systematically given by a candidate was in the case of Mr. Joseph Cowen, M.P. for Newcastle. Mr. Cowen had large wall maps made, which, hung at the platform end of the room, were used for the purpose of illustrating his speeches on Afghanistan and India, the British Empire, &c., &c. In addition to the large maps, Mr. Cowen had printed by Messrs. Johnston, of Edinburgh, small tinted hand maps, which were given to every person in the audience. The cost of this part of Mr. Cowen's canvass was about £150. The Society has been favoured by Mr. Cowen with copies of the maps so given away of the British Empire and of Afghanistan, which very handsome gift the Council have acknowledged. A copy of each map will be found in this Journal, and will show to the members of the Society a new way of popularising the science of geography and of giving point to an address.

REVIEW.

"THE CONGO, AND THE FOUNDING OF ITS FREE STATE." *

BY THE REV. HENRY EVANS, D.D.

WITH the discovery of the mouth of the river Congo begins the political history of Congo Land. That event occurred in the year 1484-5, while a naval expedition was sailing along the coast of Africa for the purpose of discovering the East Indies. Four centuries have passed since, and just in the closing year of the fourth the full story of Congo exploration is given to the world in two noble volumes by Henry M. Stanley. "How I Found Livingstone," and "Through the Dark Continent," by the same illustrious traveller, had done much to make the civilized nations acquainted with Central Africa; but these volumes on "The Congo, and the Founding of its Free State," add greatly to our knowledge and far surpass in interest all that has been previously written. The first chapters of the work are occupied with a history of the Congo prior to Stanley's explorations. Then follows an account of the negotiations which led to his last journey. Subsequent chapters narrate the founding of "The African International Association"; the voyage up the mighty Congo, with its marvellous triumphs over difficulty; the founding of Léopoldville; the discovery of Lake Leopold II.; and the return to Europe for help toward the fulfilment of his undertaking. With an account of Stanley's resumption of work in Africa the first volume closes. Volume II. continues the story of exploits, bargains, perils, battles, and victories. The closing chapters are devoted to Europeans in Africa, the discussion of climatic questions, and an account of the Berlin Conference at which the political relations of the new Congo State were settled.

The dimensions of the new State are immense. They extend from eight degrees North Latitude to thirteen degrees South, and from East Longitude 12° 15′ to 30°. Or, to put it in another way: the area of the Congo basin exceeds one million square miles—an extent of country nine times larger than the British isles, five times larger than France, or about equal to one-third of the entire continent of Europe. And recent European Conventions have extended the free-trade area very much farther still. In physical characteristics, this vast and hitherto almost unknown territory is as remarkable as it is in extent. Stretching right across the Equator, it covers more than half the southern division of the Torrid Zone. From East to West the surface of the land is varied, but there are no elevations that deserve to be called mountains. Rivers—tributaries of the Congo—well drain the vast region. Through its entire extent tropical vegetation flourishes. All sorts of produce requisite for man repays in abundance, and at little cost, the labour of cultivation. The *fauna*, too, is very comprehensive. There are lions, tigers, elephants, buffaloes, zebras, giraffes, antelopes, and vast numbers of plumage-birds. Amphibious-animals, such as the crocodile and hippopotamus, abound in the rivers. Domestic animals are represented by pigs, sheep, goats, and fowls. Whatever advanced civilized life requires is yielded by the country; and as the arts of civilization are employed, it will afford returns practically incalculable.

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* "The Congo, and the Founding of its Free State: A Story of Work and Exploration." By Henry M. Stanley. Two vols. London: Sampson Low and Co. (These two volumes were presented to the Society by the Author.)

The Congo is an empress among rivers. The embouchure on the Atlantic coast is near the southernmost part of the Gulf of Guinea. It was formerly called the *Zaire*, and lately the *Livingstone*. Its channel is a hundred fathoms deep, and the volume of water discharged into the ocean is so immense that the area of the river basin drained by the mighty Congo, affords the easiest conception of its vastness. For about seventy-five miles from Banana Point the river may be regarded as an arm of the sea; and for about forty miles more, or as far as Vivi, it has a deep, wide channel, favourable in every way to navigation. Vivi is situate at the foot of the rapids called Livingstone Falls, which are a succession of cataracts extending up the river to Stanley Pool, a distance of about two hundred miles. They are fifty in number, and make up a vertical fall of about one thousand feet. The country through which this part of the river flows is very irregular, almost mountainous, but abounds in streams. Stanley Pool is a great expansion of the Congo, twenty miles long and ten miles broad. At its lowest outlet stands Léopoldville, the *entrepot* of the Upper Congo. Stanley represents it as being, at the time he left, in a flourishing condition:

> "From the matins to the vesper bells, excepting Sundays, work—purposeful work—ran on in a steady, unruffled current. By this means, nature assisting, the gardens teemed with abundance, and the houses lined the terrace in an imposing row, so that our guests from Nyangwé uttered exclamations of admiration, which were indeed echoed by everybody on the boats. Nor on searching into details was there any cause for regret. All the chiefs round about were on excellent terms with the Europeans; the market held at Léopoldville Plaza supplied all that the community needed. There had been no outbreak of temper, and, consequently, there was no, marring or inharmonious incident to relate. The magazines were full of goods and provisions containing enough to supply all the Stations on the Upper River, and for the new places to be established on the next journey to the regions above."

From Léopoldville up the Congo for about a thousand and seventy miles, the river is easy of navigation. The gradient of descent is four inches to a mile. It receives numerous affluents on both sides of its course from Stanley Falls. If the navigable water belonging to these be taken with the Congo itself, not fewer than five thousand miles of river-way are embraced, along which commerce may move with every natural facility. At the foot of Stanley Falls, one thousand and seventy miles above Léopoldville, the waters of the Congo are upwards of fifteen hundred feet higher than the sea level. The country rises higher and higher above the level of the sea until the region is reached where the Nile has its sources. Lake Tanganyika, formerly supposed to be the head waters of the Nile, is found to be really connected with the Congo. Part of the land on the sides of this lake rises as high as two thousand five hundred feet above the lacustrine level, and the water flowing from the lake to the Congo falls in the two hundred miles of its westward course over two thousand two hundred feet. The vast, elevated region included in the basin of the Upper Congo, although tropical in situation and climate, is fertile. Stanley calls it "the real heart of Equatorial Africa, whose bountiful and unparalleled richness of soil will repay the toil and labour required to bring it within the reach of Europe . . . It was this million square miles which we may call the kernel, that was worth the trouble of piercing the two hundred and thirty-five miles of thick rude mountain husk which separates it from the energies of Europeans, who, could they but reach it, would soon teach the world what good might come out of Africa."

The country now called the Congo Free State is rich in the natural elements of prosperity. Rice, cotton, and sugar may be produced in almost unlimited abundance; and yams, pumpkins, tomatoes, melons, sweet potatoes, and tropical fruits may be obtained in incalculable quantities. "Every native village on the Upper Congo has its sugar-cane plots and maize gardens. Bananas and plantains thrive marvellously.

In the Kiva valley the natives eat bread of millet flour; but the cassava or manioc furnishes the staple of farinaceous food along the main river." In the materials of commercial industry there is also good reason for cherishing high expectations. Ivory may be obtained in great quantities. It is estimated that in the Congo Free State there are at least two hundred thousand living elephants. The ivory from these, on a calculation of fifty pounds weight from each, would yield £5,000,000. Skins of leopards, lions, antelopes, goats, buffaloes, etc., may be obtained in indefinitely large quantities; also feathers of tropical birds, hippopotamus' teeth, tortoiseshell, indiarubber, palm-oil, myrrh, frankincense, gum, cam-wood, copal, red-powder, and orchilla. There are mines of copper, plumbago, and iron; and it is believed that gold is to be had in extensive quantities. The yield of the Congo State promises to be such as largely to influence the future history of now civilised nations.

That the climate of the new State, though tropical, is salubrious enough for its own native population, is amply proved by the healthy muscular development, fine physique, and lengthened age of its numerous inhabitants. At least fifty millions of people flourish there in good health, and many of them at fourscore years of age are active enough to fulfil the part of leaders of their tribes. The land is elevated, abundantly watered, and, at the same time, little troubled with what is the chief source of insalubrity in tropical countries, a marshy soil. True, it is always summer; but in 1882 the maximum heat was ninety-four degrees Fahr. in the months of February and May, while for the three months next following the maximum was eighty-six. The lowest temperature for January in the same year was seventy degrees. In June it was only sixty; in July and August it was as low as fifty-six degrees. Such a scale of temperature, unless the year named was exceptional, need not be unendurable to Europeans. To those of vigorous constitution who go there early in life, and to the children of Europeans born in the country, the climate need not be regarded with special apprehension. The months of June, July, August, and September are the dry period, when scarcely any rain falls. In 1882 the rain-fall during February, March, April, and May was nineteen inches; during November, December, and January it was twenty-one inches. Parching winds and prolonged droughts do not characterise the climate. Great heat and abundant moisture are not, it is true, favourable to health; but whether it be owing to the porous nature of the sub-soil affording constant natural drainage, and as a consequence leaving no stagnant water to produce fermentation, or whether it be due to the chemical or mechanical action of rain on the atmosphere, the former dissolving, the latter entangling and carrying away miasma, the important fact remains that the period of most rain is the healthiest. The mean temperature in India is much higher than in Congo-land, and in India, too, cholera and dysentery are much more frequent and severe. In short, these maladies are not more troublesome in this part of Africa than they are in European countries. It would seem from these facts, and from the experience of travellers, that if heating food and stimulants were avoided, if a diet consisting chiefly of cereal produce and fruit were used, and if in other respects strict regard to the laws of health were uniformly observed, Europeans on becoming acclimatised may enjoy life in Congo-land without any dread of inevitable disease, and with even greater hope of old age than in India.

The religious and social condition of the natives is of the lowest pagan type. They have the name of God, but He is to them only a name. Having no notion of a Divine Father, they have none of prayer. It is to charms and witchcraft—the latter unsurpassed in the world for roguishness—that the blinded creatures fly. Still they have a decided expectation of a future state. When a chief or head-man dies, they kill his slaves that he may go into the other world suitably attended. Under the influence of such an idea, it is easy to imagine what a dreadful sacrifice of human life is ever going on; and in the utter absence of a moral code, and hardly even, if at all, the rudimentary apprehensions of conscience, their belief in a future state only aggravates the misery of the present, without affording any elevating aspiration toward a life nobler and happier. Polygamy is the usage of the country. It is a popular standard of greatness. As a rule, girls are betrothed in their early years, the intending husband paying a deposit, and completing the purchase by instalments. This, according to the way wealth counts among the people, is often no small amount. But when paid for the wife becomes the property of her purchaser. It is solely a matter of business, and should the girl die before joining her husband, her parents have to provide him with another.

Children belong to their mother and her relations, their father having little or no control over them. In this there is a reminiscence of the primitive law of marriage, such as is found still lingering among the Australian aborigines, the American Indians, and almost every isolated people, especially those of Turanian origin. In the oldest civiliaztions, social and family arrangements were founded on the rights of the woman. This system has been called "Matriarchy;" it is the most ancient principle of domestic government, and manifestly appears in the Scripture law: "Therefore shall a man leave his father and his mother, and shall cleave unto his wife." According to this law it is the man who leaves the home of his birth to join his wife, not the woman to join her husband. Since the Fall human relations have been disordered, and political systems have made the husband the foundation of all relations. But exogamy and descent in the female line is seen in the most ancient usages. Furthermore, in Congo usage, property does not go from father to son, but from uncle to nephew. The eldest son of the eldest sister has the right of inheritance, and in methods similar to this slaves and real property are apportioned at the owner's death. Slaves are the property of their owners. They constitute the chief capital of those who are called rich, but their condition does not materially differ from that experienced by the free.

Ethnologically the inhabitants of Congo-land belong to the race called Bantus, one of the six chief families by which Africa is peopled. Northern Africa is occupied by a Semitic race. In the region of the Sahara, in the basin of the Nile, in Abyssinia, and in the country of Somali, the race is Hamitic. Between the Niger and the Gambia the Ashanti branch of the negroes have their abode. Interspersed with these there are peoples of the Nuba Fulla type; but next, over the mighty equatorial expanse, is the Bantu race, the greatest of all African races. Below them, toward the Cape of Good Hope, the Hottentots dwell. Reports have been made of a race of dwarfs unlike all other Africans, but their home has never been found. They are so elusive that their existence is as yet only hypothetical. The supposed existence of such a race doubtless rests on remains of degraded tribes, met in dispersion among other and more prosperous families. The Bantu language is marked by features of the strongest individuality. Mr. Cust says:—

> "The Bantu languages are soft, pliant, and flexible to an almost unlimited extent. Their grammatical principles are founded on the most systematic and philosophic basis, and the number of words may be multiplied to an almost indefinite extent. They are capable of expressing all the nicer shades of thought and feeling, and perhaps no other languages of the world are capable of more definiteness and precision of expression. Livingstone justly remarks that a complaint of the poverty of the language is often only a sure proof of the scanty attainments of the complainant. As a fact the Bantu languages are exceedingly rich."

The words of Mr. Cust, Secretary of the Royal Asiatic Society, are in accord with all that Stanley and others have made known to the world respecting the Bantus.

The language of this race contains evidence of having been once the speech of a highly-intellectual people. All the linguistic evidence goes to prove that the Bantu language is not an evolution from ruder dialects, but was, in a very high degree indeed, superior in the past to what it is now. As always happens with the debasement of the people, there has come disintegration of their language. The traditions of the country tell the same story. All through the path of white men accounts have been heard of former and more powerful kingdoms. The King of Congo alone maintains his status and title. During the present century other sovereignties have become extinct.

The Congo Free State is under the government of an "Association," which is guaranteed by the principal European governments. Colonel Strauch, a Belgian, is President; Leopold II., of Belgium, is Suzerain. At a Conference in Berlin, on the 26th of February last, under the Presidency of Prince Bismarck, the representatives of Great Britain, Germany, France, Austria, Russia, Denmark, Belgium, Italy, Holland, Portugal, Sweden, Turkey, Spain, and the United States, signed a General Act proclaiming and guaranteeing freedom of commerce on the Congo, its tributaries, and the districts all round its basin. Vessels under the flags of all nations are free throughout the Congo waters, the only tariff on imports being such a charge as shall cover actual expenses. Foreigners of every nationality have equal rights with the natives, including protection of person and property. The Congo Free State is included in the revised Postal Union; its territory is to be held neutral in time of war. Slavery is abolished; scientific exploration is encouraged. Christian missionaries are specially protected; and everything is to be done that shall promote the welfare of the native population. To secure the effectual carrying out of these and other provisions of the General Act, an International Commission has been appointed, composed of delegates from the Signatory Powers, each Power being represented by one delegate. The Commission takes charge of everything relating to navigation: "It regulates pilotage, tariffs, quarantine, and river police; it has power to contract loans on the vote of a majority of two-thirds of its number, and secure them on the revenues with which it is entrusted. Appeals against the administration of its agents are to be made, in the first instance, to the Consul of the country to which the appellant belongs; next to the Commissioners themselves, and lastly to the Governments represented on the Commission. In case of need, the naval forces of the Powers shall be employed to enforce their decisions. *The International Association of the Congo* agrees to all these stipulations, and that corporation is to have sovereign rights. Its blue flag with a golden star in the centre is to be treated as the flag of a friendly government. The Association is thus entirely unique. It is philanthropic, and aims at the civilisation of Central Africa as its supreme purpose. Such a government as it provides for the country is favourable to the elevation of the native race. In other lands the advent of the white man has been followed by the decadence of the natives, but everything in this instance promises that the Bantus of Congoland will be among the imperial people of the future.

The prospects of a new country with such wonderful resources, and capable of such immeasurable possibilities, are in the highest degree interesting. Politicians, men of learning, men of commerce, all feel it. Probably to many its religious future is the most absorbing of all considerations. A race only exceeded in numbers by the Chinese and Hindus, and accessible to missionary effort, as these are not, should and will be viewed with the intensest emotions of pity and hope.

There are no religious writings pre-occupying the native mind; no idolatries rooted in their habits to be put away; no barriers of caste to be overcome, and no priestly class with profitable institutions to defend. Moreover, their disposition is friendly; they are confiding, docile, at least in youth; and, if lazy, have a willing recognition of the superiority of white men. There are no imposing temples or hoary rites to challenge native allegiance and fortify hereditary opposition to Christian truth. In these respects the way of the Gospel is free.

As regards the evangelization of the country, the true method will be attained by living among the people, exemplifying practically, as well as by oral teaching, the nature of Christianity, and carrying forward, hand-in-hand with direct efforts for their salvation, the industries and arts of civilised life. Missionaries to the Congo Free State should be vigorous in health, fertile in resource, able to do anything with their own hands that may be needful, and, above all, men full of spiritual life. There will be many sore trials, and what is hardest to bear, long waiting. A people so destitute of learning, so sadly without social morals, having no letters and no religious organization, cannot be won to Christian experience and decorum otherwise than slowly. Missionaries will need all the support of spiritual life themselves, as they devote their efforts to the instruction and pastoral supervision of the people. They will need to bring science and domestic institutions with them. Rightly to deal with polygamy on so vast a scale will try to the very utmost the wisdom and fortitude of Christian teachers.

All expenses, of course, must be met from home, so far as is requisite to found stations and furnish the necessary equipment for work: the Mission should be thenceforth self-supporting. This seems to be in the main Bishop Taylor's plan. Its principle is sound, and no doubt will be abundantly justified, but it is sadly easy to make mistakes. But next to consecrated enthusiasm it is requisite to guard against failure, by observing the laws of nature, and eschewing everything which suggests a reasonable fear of tempting God. There are now a good many missions in Equatorial Africa. The Roman Catholics are mightily striving to establish their system in that land. The Pope has divided the great expanse into four Apostolic vicariates, and on Easter Sunday last forty additional missionaries were sent thither from Algiers. These are missionaries trained on African soil for work in Africa. One of their methods is the purchase of young children of both sexes to be brought up and trained for missionary work among their own people. The design, as a matter of policy, is sure to bear fruit. No doubt all the missions in the country will make instruction of the young an especial part of their efforts. It will repay all that can be done, as will also female effort among the women. A new world is now opening. As we write a scheme of railway communication has been projected, and will be proceeded with immediately. The heart of Africa will, at no distant day, feel the touch of civilization. All will not be blessing; but the door will be open to the Gospel, and every true Christian will earnestly pray that the country may speedily become the kingdom of God and of His Christ.—(*Wesleyan Methodist Magazine, February, 1886.*)

CORRESPONDENCE

DR. H. TEN KATE IN SURINAM.*

His Highness Prince Roland Bonaparte instructs me to forward you the enclosed account of the Dutch traveller, H. Ten Kate, already known for his important travels in the South-Western States of North America and his recent travels in Lapland. Dr. H. Ten Kate has been encouraged to undertake this new expedition by Prince Roland Bonaparte, who is pleased to take advantage of this opportunity to obtain anthropological data which will complete the ideas contained in his work, "The Inhabitants of Surinam." (Signed) F. ESCARD.

Paris, 15th January, 1886.

Doctor Ten Kate, who left Europe in May last year, arrived at Paramaribo on June 13th, after stopping a few days at Demerara. He took advantage of his stay in the capital of Dutch Guiana to make some short excursions of a few days, and to collect at the hospital some native brains and skulls. He afterwards went on the Upper Para, where he visited two Indian villages, viz., Courbubo and Sabacon. In the first of these villages he met several of the individuals whom we had the opportunity of studying at the Amsterdam Exhibition in 1883. He next visited the banks of the Upper Cottica and of the Patamacca, where he had excellent opportunities of studying the Negroes of the Aucaners woods and the rare Arrowak tribes of the surrounding district, and also of collecting numerous zoological specimens (the lower animals especially). These regions are almost inaccessible for want of roads, and one can only get to them by a long and arduous journey by canoe. He went some time after to Coronie, in order to make some excavations on the sites of the ancient habitations of the Indians. The country around Coronie is one of the most beautiful of the Surinam coast, but one is almost eaten up by mosquitoes. The results of the excavations which the doctor made did not by any means repay the trouble he had in making them, as he only found two skulls, some pieces of ornaments, and a few stone hatchets.

From Coronie the Doctor went on the Upper Saramacca, in order to study there the Forest Negroes, called Bekous and Mousingas. He stayed some time at Maripaston, the residence of the principal chief of these Negroes. He was able to measure several of the Negroes, but he declares that, from an ethnographical point of view, these black people have lost much of their distinctive character.

On the 10th September the doctor, accompanied by Mr. Kalff, a magistrate, and with ten men (boatmen and servants) started on a fresh excursion, which lasted 78 days. They followed first the Wanica, a canal which connects the river Surinam with the Saramacca, and then entered the Coppename.

On the 11th they stopped at an Indian encampment quite close to Amitati or Kalebas Creek. These Indians are much mixed with the Negroes. They call them at Surinam Karbougres, but they call themselves Kalinas (Caribs). These half-breeds present a curious mixture of Indian and Negro characteristics, and as the doctor measured a pretty fair number of them, his observations will probably show some curious facts.

From this place the explorer went on the Tibiti, where he visited the Indian villages, which are shown on the fine map of Surinam by Cateau Van Rosevelt.

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* Notes upon the recent travels of Dr. H. Ten Kate in South America ("Bibliothèque du Prince Roland Bonaparte, Cours la Reine 22," Paris).

On the 17th September the party entered the river Wayombo, stopping on the way at several encampments of Caribs, who are also mixed races.

On the 20th they arrived at a more important village of Arrowaks. This agglomeration is situated in the plain or savannah which stretches between Donder Creek or Acouracalli and the Kaywando, on the right bank of the Wayombo. The explorers sent back their boats and seven men to Paramaribo, and installed themselves at this village to rest for a few days. The Wayombo is a beautiful river, whose vegetation differs considerably from the other rivers of the colony.

The Arrowaks of this district have lost much of their originality, much more so even than the Caribs; and, in consequence, it is difficult to make good ethnographical collections. These Arrowaks have retained the ancient clan institution similar to that of the Red Indians of North America, but on the Acouracalli there are only representatives of seven clans, while the Arrowaks reckon to have about fifty. The doctor was able to measure almost all the adult population of this village.

On the 28th September the explorers left their headquarters to visit the upper course of Nikerée, a river of which very little is known. They had with them five men in two canoes.

Passing along the Arrawarra, a little stream which connects the Wayombo with the Nikerée. They camped on the same day on the Upper Nikerée, which they afterwards ascended for five days as far as the third rapid, which is much above any previously known place, or anything indicated on the latest maps. They were not able to go further, as there was not sufficient water for the canoes; and besides, the attacks of fever made the journey very painful to the explorers.

The district watered by the Upper Nikerée is a well-wooded but absolutely uninhabited country. The banks of the river are composed of clay, but the numerous rocks in the river are granite.

The travellers, who were very unwell, arrived at the Arrowak village on the 7th October, and rested there several days.

On the 12th Mr. Kalff started back for Paramaribo, and the doctor went down the lower Nikerée with his Negro servants in a large canoe, which had been built by his orders during his absence. The journey up to Nikerée is very uninteresting, and the town is a truly dead town.

On the 18th October the doctor ascended the river Corantin to visit Oreala, an Indian mission on the English side of the Corantin, but when he had arrived near Robinson's Isle he was so ill that he was obliged to return to Nikerée where he was kept by the fever for three days. He started again from this place at sunrise on the 22nd, and in the evening he arrived at Oreala. There, for the first time, he met some Warron Indians. Their village, which consists of huts very similar to those of the Kalinas, is situated on a high chalky cliff, overlooking the river. After staying several days at the mission, he went to an Arrowak village called Epira, situated on the south of Oreala, on the English bank of the river Corantin. On the 2nd November he returned to Nikerée, but he was not allowed to land there because of a quarantine that had been imposed by the colonial government on all boats from the English side, where it was said the yellow fever was prevalent. He was obliged in consequence to go back, and passed thirty-three hours in his canoe before arriving at Skeldon, in British Guiana. He then went at once to Georgetown by land, and took advantage of his stay in that town to make several excursions on the Essequibo and the Massarouni. On the 27th November he was back again at Paramaribo.

Up to the 1st December, 1885, the doctor had already measured with very great detail, 106 individuals—Kalinas, Arrowaks, Karbougres, Forest Negroes, and

Hindous. In his last letter the doctor informs us that he hopes to reascend the Surinam in order to study the Indians there; then to go up the Maroni to visit the Forest Negroes. He will afterwards make a tour in British Guiana, especially on the Pomeroon river, where he ought to meet Mr. Im. Thurn, who has promised him his assistance. He will afterwards go to the Isle of Trinidad, to see the feeble remains of the native population of that island. He will then return towards the west, to visit Venezuela, to study the Guaranos, arriving at Caracas by land. From thence he will go to Florida, to ascertain if the Seminolo Indians belong to the Carib family. This circular journey will probably then be finished in the midst of a population more or less Carib in its origin, which will enable us to have a precise collective idea of the relations of these populations, for they will have been seen and examined by the same observer.

The individuals measured by Dr. Ten Kate up to the 1st December, 1885, are divided as follows :—

	Men.	Women.	Total.
Arrowaks	31	18	49
Kalinas	3	6	9
Warrons	8	1	9
Karbougres (half-breeds of Negroes and Indians)	12	6	18
Forest Negroes	8	4	12
Hindous	9	—	9
	71	35	106

The cephalometrical index (without corrections) of the Kalinas varies from 78·82 to 85·71, and the nasal index from 75·46 to 92·68. The height varies from 1·38m. to 1·62m. (4ft. 6¼in. to 5ft. 3¾in.), and the colour of the skin corresponds to the numbers 29, 30, 31, 44, 45.

The cephalometrical index of the Warrons varies from 78·57 to 84·04, and the nasal index from 58·49 to 82·35. Their height varies from 1·48m. to 1·63m. (4ft. 10¼in. to 5ft. 4in.) The colour of the skin corresponds to the numbers 23-33, 29-30, 33, 44, 45, and the colour of the arms and legs to 28-29, 29-30, 30, 29-43.

The cephalometrical index of the Karbougres varies from 75·79 to 90·14, and the nasal index from 64·28 to 95·24; and their height varies from 1·36m. to 1·64m. (4ft. 6in. to 5ft. 4in.) The colour of the face corresponds to numbers 29, 22-30, 29-30, 30, 30-44, 44, 49, and of the arms and legs to 28-29, 29-43, 30, 30-37, 30-43, 39-43.

The teeth of the Kalinas (Caribs), of the Warrons, and of the Karbougres are, like those of the Arrowaks, almost always bad, being very irregular and much worn. The Caribs and the Warrons have straight hair, while the Karbougres have wavy or curly hair.

Amongst the Forest Negroes the cephalometrical index (without corrections) varies from 75·80 to 83·15, and the nasal index from 84·44 to 109·52. The height varies from 1·47m. to 1·65m. (4ft. 10in. to 5ft. 5in.) The colour of the skin corresponds to the numbers 27-28, 28-29, 29-30, 29-37, 29-43, 37-43. These Negroes have good and regular teeth. The dynamometric experiments (by pressure) gave numbers relatively poor, even among the Forest Negroes. It seems that among these the muscular power does not correspond with their athletic appearance. The doctor has, in addition, gathered much information upon the colour-sense in the six series previously cited. The anthropological and natural history collections which he will bring home with him are intended for the national museums of France and the Netherlands.

PRINCE ROLAND BONAPARTE.*

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(Extracts from letters received from Rev. C. H. Bradburn, India, descriptive of his voyage thither.)

PORT SAID.

Port Said is built on a sandy promontory surrounded by swampy yet barren ground. The medical officer was followed on board by about thirty Arabs, who had pushed off in their many-coloured boats, and who had wares of various kinds to dispose of. We did not stop to inspect the merchandise, but, the doctor having found we had a clean bill of health, crossed the gangway, being anxious to step ashore once more, where we split into small parties. Our company of six was taken in charge by a dragoman. As we passed through the gangway and began to descend the companion ladder down the ship's side to one of the boats, we were at once in a perfect bedlam. "Jabber" is the only word to describe to the ear the noises made by the number of men struggling, pushing, and shouting, each one struggling to get some custom for his boat. But the sound is not all: the sight is more interesting. Imagine the boatmen, all dressed in different colours, not wearing coat, trousers, &c., but just one long loose gown, falling straight from the shoulder, and those who can afford it wearing what may be well called a pair of bags underneath, in lieu of trousers, hanging ten or twelve inches below the dressing-gown-like garment. Another with a snuff-coloured red gown and blue trousers and bareheaded. Shabby-fine describes them all, and if it were not for the fine broad shoulders and noble carriage of these Arabs they would look despicable. As it is, you lose sight of their tawdry dress in your admiration of their tall and handsome figures. The poorest man you meet walks with the dignity and consequence of an emperor. Our dragoman was just such a man, and we follow him as he clears the road for us, a task which would be very difficult for us to do. We managed at last to get ashore, and the first words to greet our ears were "Good day, Mr. Missionary. Give us a copper."

The town is built on sand—I said sand—the streets are *not* paved, and there is not a trace of a sewer. As you make your way slowly between the shops, strong and rather unpleasant odours greet your senses. The scavenger dogs are lying about ready to consume any refuse they can find thrown out for them. Blind and half-blind beggars are lying about in the dust. The streets appear to have about six inches depth of dust, and "to humble oneself in the dust" has a new and very striking meaning under these conditions. The buildings of Port Said are gaudy lath-like buildings, or rather were gaudy, for over all there appears to be a faded appearance, which seems to affect buildings, citizens, and the morals of the people alike. It is a fearful place! Licentiousness and Vice seem to reign supreme. Casinos or music halls are open to the streets, and the managers of these places provide skilful players, who lure in their prey by the sweet sounds of many instruments. Almost every house is a wine shop, and all along the streets tables are set at which men are seated drinking, smoking, and gambling. And such men—awful-looking creatures! Europeans of nearly every nation, a few Englishmen, Greeks, Frenchmen, Germans, with all sorts of Levantines, a number of Egyptians, and some Arab donkey drivers, We were not allowed to have much time ashore, and we made the most of it, purchasing fruit, sun hats, and other things. When we returned to the ship we found her deck crowded by hawkers of all nations, with all kinds of fancy rubbish for sale, and for which they demanded exorbitant prices; but after a lot of disgusting squabbling they would take your price. I took a fancy to buy a few fans, and after half an hour's bargaining I bought some for 1½d. each, for which the hawker had asked 3d. each.

THE RED SEA.—A THUNDERSTORM.

The captain was a little surprised at the heavy weather and rain we had on Monday. On the Tuesday it calmed down a little, but towards seven o'clock in the evening the sky grew black and threatening, and when we came on deck after dinner we saw flashes of lightning which vividly lit the sky. The storm seemed to be a long way off, but gradually drew nearer, and about nine o'clock we lay down on our mattresses on deck (the cabins were stiflingly hot), and although the lightning flashed around us we were soon asleep. I thought in my dreams I heard some one calling me, and found it was Day, who had seized my arm, and was calling, "Bradburn, get up." I got up, very much astonished. Such a sight met my eyes as I never before saw and shall not soon forget. The very heavens seemed to be pouring fire upon us. The lightning seemed to be dancing around us. Rolling up my bedding, I made a rush through the blinding storm to the music-room, and from two to half-past three stood spellbound in amazement and awe at the majesty and power displayed. The lightning flashed wildly bright and intensely vivid, and the rolling thunder kept up its deep diapason in its immediate wake. And thus it went on, flash after flash, roar after roar, as though the very heavens were tearing themselves to pieces in agony and desperation, and without so much as a pause as would enable me to regain my sight. To speak of a blinding storm is one thing, to be blinded by a storm like this is quite another one. Just imagine the blackness of darkness, and then, in the twinkling of an eye, flashing out of the darkness, a brightness lighting up the heavens and the ocean which defies imagination and must be seen to be realised. The form of every cloud and wave is distinctly marked, and in another instant all is again pitchy darkness. But only for a moment is this darkness, for a tail of blue light is writhing, literally writhing, within arm's length. During the storm some of the men were in the rigging, tying up a sail which had broken loose, and whilst there the lightning was playing in and out of the spars, and round the men, and the roaring thunder reverberating through the heavens. Happily the storm did us no harm, for which we felt devoutly thankful.

THE DISCOVERY OF THE SOURCE OF THE LUGENDA RIVER.

WE have been favoured by the Rev. W. H. Penney, M.A., Secretary of the Universities Mission to East Africa, with a copy of Bishop Smythies' Journal referred to by the Rev. Chauncy Maples in his letter published in the last Journal. We have reprinted it,* and have added the sketch-map which was prepared for the Rev. Chauncy Maples' paper, which illustrates somewhat the region the Bishop travelled over.

The Bishop prefixes the Itinerary with the following remarks:—

The following is an account of my journey from Matope, on the Upper Shiré, to Newala, the station of the Universities Mission near the Rovuma, after the launching of the Charles Janson. When I wrote my notes I had not seen Mr. O'Neill's paper on the sources of the Lugenda, or the map founded on his researches. I am glad to see that all I have said independently, from an unscientific point of view, about the country which I passed through by accident, coincides with his accurate

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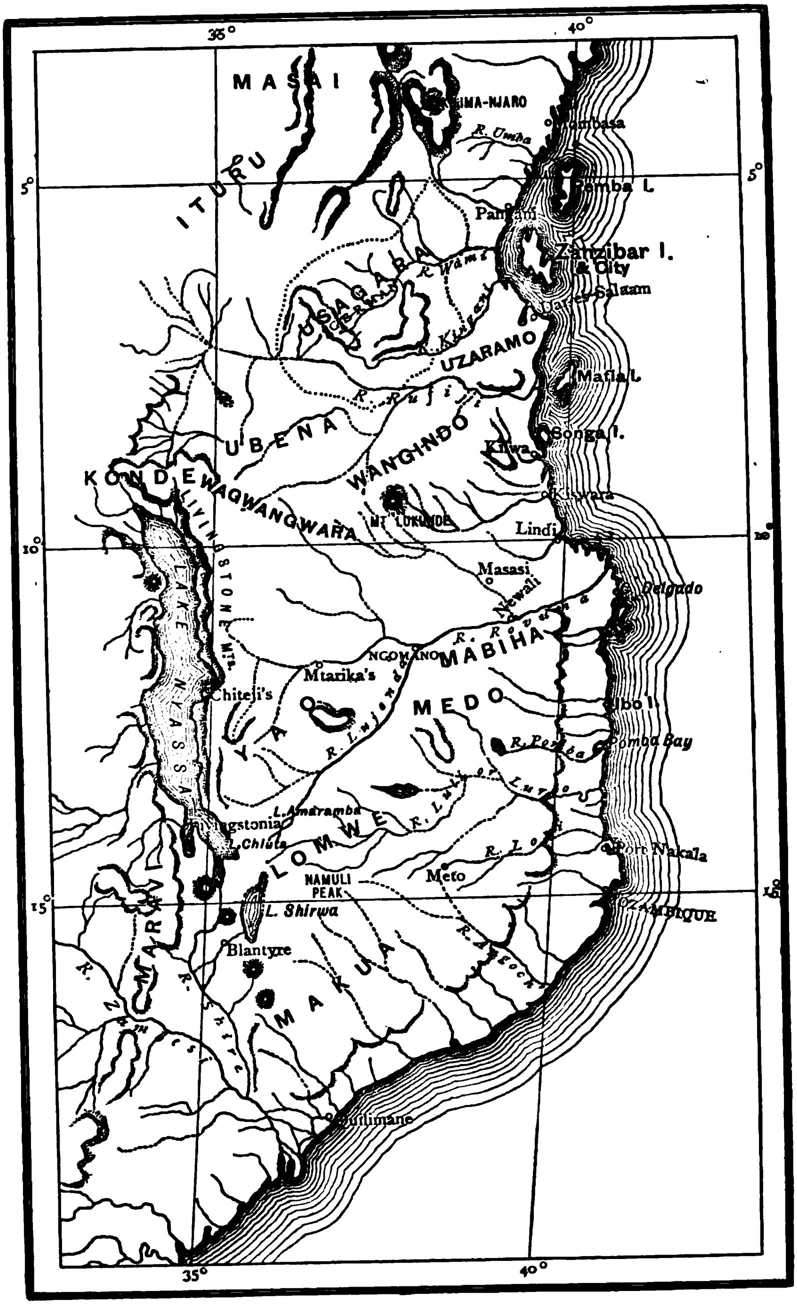
* "A Journey from Matope, on the Upper Shiré, to Newala, on the Rovuma, by the Right Rev. the Bishop of the Universities Mission to Central Africa in 1885."—Printed at the Mission Press, Zanzibar.



SKETCH-MAP OF EAST AFRICA.

and careful account. The only apparent difference arises from the different route taken by him and myself along the east shore of Lake Chiuta and the river above it. Mr. O'Neill's path from the point where he crossed the river, which he heard called the Msambiti, but which I only heard spoken of as the Lugenda, lay at some distance from the bank, whereas I kept close to it. Mr. O'Neill very likely heard the name Msambiti given to the river, when he was on the W. side. Apparently the rivers are sometimes called by different names on the right and on the left banks. Lugenda means in Yao a large river. We left the river to follow an inlet ending in a swamp, and marked on the map as Litande. From that point I should have said that the Lugenda widened out into a considerable expanse of water, but I should hardly have described it as a lake. Yet the stream is so sluggish, and the general appearance such, that my companion remarked, "It is more like a lake than a river." This was Amaramba. We then left the river, and did not see it again till we reached Pachemponde (which is probably Pa che Mponde, the place of Mponde), one day above Mtarika's.

At the N. extremity of the hill Mluli we encamped on a river, which, no doubt, is the Lukono of Mr. O'Neill. There is a mistake in the map, which makes it flow to the S. of Mluli instead of to the N., as he mentions and as we found it. We walked close by the bank of the Lugenda, above the place where Mr. O'Neill crossed, as far as the inlet Litande, which I have mentioned. Here there are three towns marked on his map. We saw a number of houses all along the bank, but Napulu was the only chief's name we heard, and we thought they were all part of his people. Che in all these cases being a title, these are probably the names of head men under Che Napulu. As Mr. O'Neill's road lay at some distance from the river and Lake Chiuta, he had not the same opportunity of seeing that lake as we had, and he evidently did not know of Chechenekwao's large town, probably owing to his not having a guide, which he mentions at this part of his journey. We, on the other hand, having guides from Kalinga's, were led by a road which struck Lake Chiuta as we went north at what appeared to be the first inhabited point of its shore—a considerable village, which we reached on September 17th. I may safely conclude this, as we had been travelling over ground at other seasons evidently flooded or marshy, on which no village could be built. We then had a long day's walk, as I have described, to Chechenekwao's large town, from which we got as good a view of Chiuta as is possible on this side.

Our encampment was on a promontory which runs out into the swamp, within a few yards of the actual water, it being a sort of elbow round which the water of the lake runs, just as it narrows into the still broad and sluggish river. From this point we looked down the lake, and had a good view of its islands and the mountains on the other side.

Though it would not give a wrong impression to describe Chiuta, seen from here, as Mr. O'Neill described it a month later in the year, as a "confusion of swamps and ponds and islands of reeds," yet it did appear to me to bear more of the character of a lake than Amaramba, of which, however, I did not get so good a view, except that Amaramba, river-like though it appeared to me, was a sheet of clear open water. Amaramba might, I should say, be described as a broad river, Chiuta as a vast swamp. But Chiuta could hardly in any sense be described as a river, and I have no doubt after the rains it appears as a not inconsiderable lake. But I think Mr. O'Neill will say that the map is mistaken in placing the inlet Litande high up in the broadest part of Amaramba, and that it ought really to be just under a promontory where the stream broadens out into its widest part. This promontory would prevent a traveller from the S., who only followed the bank as far as Litande, from being able to estimate the breadth of the lake beyond.

Newala, October 26th. 1885.

We left Matope, a few miles above the uppermost fall on the Shiré, on September 10th, 1885. I had with me Mr. Foster, a gentleman who had come out to shoot, and twenty-five men under the leadership of our faithful friend Susi, well known to the readers of Dr. Livingstone's life. We started early and journeyed by easy stages along the valley of the Shiré till the next evening. The river here winds a good deal, but on the whole takes an eastward course. We soon had Mount Zomba on our right, with a low range of hills between it and the river. On Friday, the day after we left, we got a guide from the last of Kasisi's villages, he being one of the Makololo who came with Livingstone, and are now influential chiefs. The men who accompanied me and acted as porters, were all men who came to help in the work of getting the parts of the steamer to Matope, and in the work of building, &c., mostly from our village of Mbweni.

On Friday night we slept near a ford of the Shiré, and then left its banks and travelled eastward, keeping a range of low mountains on our right. Our way lay through a wooded and hilly country. At midday we reached a river, just where it emerged from the hills, its course being marked by fine palms,* their large almost upright leaves springing from low down in the stem. I have only seen them, I think, twice before in those parts of Africa where I had been. Their dark foliage contrasts strangely with that of the trees around. Here we found we must wait until we could get another guide, because we had reached the country of another chief, Kalinga.

I walked to his first village, under two lesser chiefs, up in the mountains, about half-an-hour from our camping place. The fear of the Angoni and Magwangwara have driven the people into the mountains. The chief provided us with a guide, and on Monday we reached Kalinga's town. I had been warned against this chief as a slave trader and no friend to white people, and on inquiring we were told he would not wish to see me. He lives high up in a cleft of the mountain Chikala, much the highest and boldest of the range under which we had been walking. I sent Susi to him with a present. He treated him politely, though he said he was too ill to see him, gave us a goat, and promised a guide. We understood that one white man had been there before, but had taken a different route to ours. Before reaching our camping place at the foot of Chikala we had already seen Lake Kilwa in front of us. As I have said, we had been travelling eastward since we left the Shiré, with a range of mountains close to us on our right, culminating in Chikala, which is perhaps between 7,000 and 8,000 feet above the level of the lake. As we had to wait till the next morning for a guide, I spent the afternoon of September 14th in walking right up the side of the mountain till I reached a point almost overhanging Lake Kilwa. This mountain is almost three miles from the N.W. corner of the lake, and forms the abrupt termination of the range which appears to skirt the western shore. This N.W. corner as well as the northern end of the lake have a perfectly flat shore, with a wide belt of reed and marsh, and a level country stretching beyond as far as the eye can reach. I was surprised to find a large population right up in the mountain side, clearing ground, and cultivating fields on the steepest and most stony slopes. This seems to point to one good which may come from the evil of African wars. If all was quiet and there was no fear of these marauding tribes, and yet no civilisation to quicken thought, in a climate where everything comes to hand so readily—if there are only rivers as there are here, the people would have nothing to keep them from becoming more and more enervated, whereas the dread of the enemy leads them, at the cost of immense trouble and difficulty, to build their houses high up in the mountains, and clear and cultivate the most precipitous places. Our guide arrived with some companions the next morning, and as Mr. Foster was suffering from fever, and had to be carried, we were glad to employ these men in carrying the loads of the bearers. We were told we must go to Napulu, a Yao chief, and from him procure another guide. Our path lay round the N.W. corner of the lake, first very considerably towards the north, and then eastward along the northern shore.

We found large villages of temporary houses built on the marshy ground near the lake for the purpose of collecting the salt which is deposited there. I hear that the water of Kilwa is very brackish. All this level ground is dry at this season. We walked on this day, September 15th, a little over six hours, keeping just above the flat bordering the lake all the time. Our guide told us that the water we drank that night came from the bed of the stream which, when flowing in the rainy season, runs into the Lugenda. But we encamped on a low, stony hill, covered with trees, and obtained the water not from the marsh on the lake side, but from the other side of the hill, and apparently the stream would have no connection with the water of the lake. It certainly could never overflow this hill, and the guide said the lake had no connection with the Lugenda, and entirely repudiated the idea of there being any possible overflow, corroborating Mr. O'Neill's conclusion. It might be, perhaps, three-quarters of a mile from our encampment to the actual water of the lake at this season. On the morning of the 16th it threatened rain, which came for a short time after we started.

I went towards our well, away from the lake over the hill, and saw a flat piece of marshy land (Mtarandinga swamp), rather circular in shape and perhaps a mile across, which is a lake in the wet season. This is quite unconnected with the Lake

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* The Mwali Palm, a species of Raphia.

Kilwa, and may be one of the sources of the Lugenda when flooded in the rains. As the weather was cloudy and the distances clear, I could see, over level country, mountains on the horizon. Our guide gave us the names of two of the peaks, Kole to the south and Mriri to the north, and said the Lugenda was between us and the mountains. There are three islands like mountain tops rising out of Kilwa, apparently in a line, which might be roughly drawn from N.E. to S.W.

The centre one is really a group of two or three small islands, one being much larger and loftier than all the rest. We travelled still eastward along a sandy bank, thick wood on our left, and the Kilwa marsh on our right. In about an hour of slow travelling, the lake shore seemed to turn rapidly southward, leaving the N.E. corner a very extensive marsh, no doubt flooded in the rains, as streams came through the bank along which we walked, and which seemed to mark the shore when the lake would be at its highest, and all this low land under water. The day before we saw only a few insignificant streams not now running. Going down towards the lake, looking across the marsh, which would if flooded form the N.E. corner of the lake, we could see a range of mountains (Namuli Hills) broken into picturesque and irregular summits perhaps 30 or 40 miles off. There seemed to be a small sluggish river in the marsh. The guide said it flowed into Kilwa. No streams flowed out, which, indeed, was pretty evident. The local names of the islands in the lake are Chisi, most north, and Kiliambili, the centre and largest, and Tondwe, the southernmost.*

At midday, on Sept. 16th, we turned rather into the wood, but could still see now and then the great brown treeless flat which borders the lake. For many hours, as we travelled N.E., the country is very hard, level, and now waterless, but evidently in the rainy season a great deal of it is marshy land, and probably a considerable part under water. To our left we sometimes saw a treeless plain stretching far away towards the mountains, which I mentioned before as seen over the sources of the Lugenda.

During the whole of the 17th we still travelled N.E., gradually inclining more to the north and towards these mountains. At last we came fairly out on the level grassy plain, and found that it was in fact a considerable lake in the rainy season, with isolated, steep, wooded islands rising out of it. We skirted its S.E. corner, and in the afternoon reached the Lugenda itself. It was here still a wide extent of marsh and water, the remains of the lake which is formed in the wet season. There can be *no doubt that this lake is the source of the Lugenda.* Across this water at some distance, but seemingly with perfectly level country to their bases, were the ranges of mountains we had been gradually approaching. The guide told us that Mengoche belonged to this range, but was behind, out of sight. As far as I could judge, they ran from S.W. to N.E.; consequently, as we rounded the marsh and changed our direction from E. to N., we inclined towards them, till now we saw them opposite to us across the Lugenda, their skyline very irregular and broken into rocky peaks.

We had now come from Chikala, near the N.W. corner of Kilwa, along the whole of its N. shore, and then turning N.E. had gone on until we came to the right bank of the Lugenda.

If there were any connection between it and Kilwa we could not have failed to see it. The road lay mostly over ground exceedingly hard and disagreeable to travel over, as being under water in the wet season, it becomes baked by the sun as it dries, and is very uneven from the pressure of feet on it when it is wet. We saw five elephants in the open plain and some antelopes. Nine men we met carried strings of snails' shells, which I found were to be turned into the powdered lime which the natives carry to eat. These men told us that last month the Magwangwara had raided the district, and after a slight resistance had received the submission of the chiefs. They had then gone on to Mtarika, the chief farther down the Lugenda, whom I hope to see, and had frightened him into submission also. This turned out to be not exactly true. They were now supposed to be fighting the Maviti, on the coast east of Lake Kilwa. The guide told us that at Mangoche there was a female chief, an unusual thing in this part of Africa.

At the village on the Lugenda, where we spent the night of September 17th, there is a large population, some living in houses on piles quite in the swamp. It is three good days' travelling for a caravan from Chikala to this village at this season. For the last day and a half the water was scarce and bad, and no inhabitants after the first half day.

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* The description of the islands does not quite correspond with that given by Hetherwork and Buchanan who ascended Kisi.

After a hard day's walk, on September 18th, we came to the Lugenda again, perhaps twenty miles down or more. Here we found a large town under a Yao chief named Chekwao. Looking down the river I should think I must have seen 300 houses built on piles in the water for protection. Here, and here only, we found abundance of excellent fish, and here only I saw pelicans in the Lugenda.

We now found ourselves opposite the mountains which we had seen from time to time running apparently parallel with the river at less than 10 miles' distance. They appear lower now, probably from our only seeing the town part of the range nearest us. They also seem to run more nearly north and south than I supposed.

In the rainy season, when there is no fear from the marauding tribes, the people abandon their huts in the water and build on land. The mountains apparently come to an end in a northerly direction nearly opposite this town.

We stayed here three days instead of two, as we intended, finding great difficulty in getting guides from dread of the Magwangwara. On September 22nd we walked for about four and a half hours, keeping near the Lugenda all the way. It takes here a northerly direction, and seemed to turn the corner of the mountains we left behind as we walked. It is here perhaps 400 yards broad, flowing sluggishly, and we could see it broadening out to a much greater width beyond, opposite the island so called, where a chief Napulu lives for protection. It was not really an island, though, as we followed the arm of the river to the S.E., which seemed to cut it off, we found it almost dry where we crossed it to encamp for the night.

On September 23rd we had wooded hills of no great height close by on our right most of the morning. Their native name is Nipembegwe. They sunk after a time to a mere rising ground, over which we passed, and for the last hour had the hills on our left, here rising to a steep rocky eminence bearing the name of Mluli.

Just before reaching the gap in the chain we passed the remains of a man hanging in a tree, who had been caught and killed by the Magwangwara. It is the custom of these tribes, as of the Arabs, if a captive or slave cannot walk, to kill him rather than let him go. We had now passed along the whole of this range of hills, which springs steeply from the plain, as most of the hills of this country do. I had an extensive view of the country eastward from a low part of them. It was mostly fairly level, without mountains. The woods, which seemed bare and brown as we passed through, showed from here a beautiful mass of red, brown, and bright green from the spring foliage of the tops of the trees, red being the prevailing colour. This is all coming out now, though there has been no rain. I noticed the same last year. I suppose we had been walking N.N.E., and from one hour to two hours' distance from the Lugenda. We encamped by a pleasant running stream flowing into it.

September 24th. Still travelling about N.E. through level country, not seeing the Lugenda, but crossing several damp, marshy meadows, which probably extend to the river or give rise to streams which run into it, encamped by another wooded stream.

On September 25th and 26th we still walked through a country covered with small trees, crossing more streams and two inconsiderable rivers, now easily fordable, at about 3-30 p.m. on the 26th. After the ground had been rising for some time, the path descended between two heights crowned by precipitous rocks. I climbed as high as I could on the highest hill—that on the left—and got a good view over all the country. The heights were two of a line of bluffs, which seem to be the abrupt ending of the rises between the streams, looking over the wide valley below. I sat looking N.E., the direction of the path. Behind, I could see the mountains we had seen across the river, with a loftier one behind—perhaps Mangoche. Nearer N.W. were a line of jagged peaks, rugged, striking, and precipitous. Further N. and more distant were higher mountains, and, again, as far as I could see to the N., were still higher mountains with one marked lofty peak. In front, over the plain, were a few isolated heights of no great size and at long intervals. I fancied I could see the Lugenda in one place in the distance. A good way to the right, running N., was a low range ending in one or two abrupt peaks.

On September 27th we rested for Sunday, and I went up another height, not far off, between 400 and 500 feet above the level of a stream below. On the top were large boulders, and these completely covered with orchilla weed. This is the general character of these hills. I here got a fine open view of the chain of extremely precipitous though not very lofty peaks to the N.W. running about W. and E. I think I must have seen the river if it had been between me and them, so I can only suppose it takes a great bend to the N. and goes round them, but this is very doubtful. The whole country is swept of inhabitants by successive raids of tribe after tribe on those who settle there. We met two caravans, one a large one, of some hundreds of people returning from the coast. Susi learnt that they had been to Mtamba, S. of the Rovuma, in the extreme S. of the sultan's territory. A large number were boys and women. These, and probably some men, were slaves, whom the heads of the caravan had failed to sell. They said that Muscat Arabs used to come to the coast, and that now they did not. Probably they were afraid of the measures taken by Seyyid Barghash to prevent slaves being conveyed by sea. A great deal of cloth and powder was being carried by the caravan, probably bought with ivory. They belonged to Mponda, on the Shiré, and the other Yao chiefs we had passed.

On September 28th we again walked all day through a thickly-wooded country, passing one of the solitary precipitous hills possibly nearly 1,000 feet high.

We crossed two small rivers, and after a long walk through the same lightly timbered country, we at last came to the Lugenda on the 29th, after seven days without the sign of a village. (This would be low down the river).

Here we passed a large number of people who were living on an island in the Lugenda for protection. They call the place Achemponda, apparently after the name of the headman. The Lugenda is here divided into several streams, forming islands between them. The banks are wooded and steep. The people cross to their islands in flat boats made of bark with a sort of trelliswork of bamboo for seats. Our road to Mtarika's lay near the river. We started in the afternoon on Sept. 30th, and after sleeping on the river bank reached the chief's the next day, after about 4½ hours' walk. We had often fine views of the river, generally strewn with rocks. The stream was continually dividing and forming islands, which were thickly populated, the houses on the banks in the cultivated land being deserted at this time of the year, when there is danger from the Magwangwara. All these people are under Mtarika. We found his island unusually high, so that it could not be covered by any flood. Soon after we arrived opposite to it he sent over his son to say he had heard from Matola, our chief and friend at Newala, that he might expect us, and hoped we would all come over to his town. There we found an excellent clean new house at our disposal, and were tremendously mobbed by crowds of people for the rest of the afternoon, most anxious to study all our actions. We could now understand, from walking near the river, why we could not see it from the hills—the banks are so covered with foliage, as well as the islands, that at a little distance the water is quite hidden. Mtarika seemed sincerely glad to see us, and was very anxious to keep us, so that we did not get away till October 5th. In about two hours we reached Chilumba, a town on an island, which we were told was opposite the mouth of the Luatisi. We walked about seven hours, resting near the Lugenda. On the 6th we passed Abdallah's town after two hours, and in another one and a quarter hours I had a good view of the river broken up into a number of rapids by a great field of rocks, so that even a canoe could not pass anywhere. We had another long afternoon, and on the 7th reached Kandulu's in fifteen hours from Mtarika's. Mtarika still has his large town on the island on which Johnson visited him, but Kandulu has moved a little higher up the river. It still preserves its same character, dividing into many streams and forming islands all along its course. We rested at Kandulu's all the morning after about 7-15 a.m., and kept not far from the river in the afternoon. We had one very fine view of it when the path skirted it at one of its bends where there was no island. Beneath the high bank was a deep pool in which were some hippopotami, but otherwise it was sprinkled with many picturesque rocks which would be covered when the water rises. After a pleasant walk through ground which had been under cultivation, and was now covered with the cut trees all sprouting into green so as to give the idea of a garden, we again encamped on the river at a small village. Here we heard the Magwangwara had forded the river where it was shallow, and destroyed five villages on the islands, killing or capturing all the people. But since then, in trying to cross the Lugenda, they were attacked, and it is said a great number were killed, as, not having a river in their own country, they cannot swim. The rest are said to have gone home.

On October 8th we still followed the course of the Lugenda. On the other side of it rose a succession of isolated rocky hills, stretching away from the river; and at one place there was a short mountainous range, considerably higher than the rest, rising into two rugged peaks. In the afternoon these rocky hills began to appear above the trees on both sides of the river, showing bare fantastic forms. There seemed fewer islands.

We passed Kandulu's former island about five hours from his present town, and about eight a.m. halted near another, crowded with houses. It was in attempting to cross over and attack this place that the Magwangwara were defeated. The chief has two names—Chipajola and Mshusha. I met him in the wood with a number of men, evidently elated with their success. We had come perhaps six hours on the 8th when we reached his town. All the houses are quite temporary, as the island is covered in the rains.

We stopped here a day to buy food, and on October 10th continued our journey along the river bank. The burnt houses which had marked the track of the Magwangwara for so long were now seen no longer.

In less than an hour after leaving Chipajola's I noticed that there seemed to be a barrier of rocks across the river, and found that all the water passed through a narrow gate with a considerable fall between rocks of from twenty to thirty feet high, which are quite covered in time of flood. On both sides of the river the tops of bare isolated rocks towered above the trees. We rested at midday in a storehouse on an island, or what would be an island when the river is higher. The storehouse was stocked with grain, which had all been left by the owners in their flight from the neighbouring villages. It seems that it was their chief who invited the Magwangwara to attack Chipajola's because of some feud, and when they were defeated the people in these villages were afraid to remain, fearing the vengeance of their neighbours. In the afternoon, for about half an hour, we had a chain of bare hills on our right, and the Lugenda a short distance off on our left, with a well-wooded strip of country between. A small kind of antelope seemed plentiful in the rocks.

We camped for the night on the river bank, with a curious hill opposite, with a flat top and precipitous sides. In the distance were the Mkula Mountains.

October 11th. I went on a hill near the river, about 450 feet high, counting from the top of the bank, and had an extensive view of the country. Except over a small space to the south there were these great bare rocks in every direction. Those grouped round the hill on which I was might be called mountains. Their appearance was very striking and fine. There seemed still higher ones to the south of them. The Lugenda flows here to the N. of E. It now appears much more than it did higher up. There it was thickly shaded with foliage and without sandbanks, here it is quite unprotected from the sun, and has wide expanses of sand, often on both sides, which take up half the river bed.

On October 12th we had the fine rocks I have spoken of towering above us, bare rocky peaks rising almost perpendicularly from this plain, sometimes I should think 1,000 feet. On the other side of the river, at some distance, were the Mkula Mountains, marked by one jagged peak at the west end of the range.

In the afternoon we unwittingly passed a chief without stopping at his village. He sent after us, and some of his men took away one or two loads, and stole a few things. I told him I had been to many towns of the Yaos, and it was my first experience of the kind. It was evidently done by his orders, as he took off his cloth to give the man, who had to restore a gun he had taken. These were the people who had made friends with the Magwangwara and fought with them against Chipajola, and this may explain perhaps their feeling about our passing them by, as we had just come from the enemy's country.

In the middle of the day we had stopped to buy eggs and fowls at Mpili's, a village on an island as usual. On October 14th we travelled about six hours, encamping at midday, again opposite some mountains close to the river, which form three bold ascending heights. In the evening we were opposite Pumbulu, the finest and boldest of these rocky mountains we had yet seen. It ran from the Lugenda valley one great solitary rocky mass, becoming perpendicular on all sides as far as we could see towards the top, and forming a jagged summit.

The character of the country is the same as at Masasi. Solitary rocks or groups of peaks rise directly from a wooded country, which has otherwise no hills, ridges, or long lines of mountain range. Still keeping close to the river we make about six and a half or from that to seven hours on the 14th. The rocky hills seemed to disappear. We continued to pass villages, and still wherever there was an island it was thickly populated. The woods have become full of sweet scents from the flowering trees. The sun gets such power that it burns the men's feet to walk at midday, and even sometimes before.

Between 9 a.m. and 10 a.m. we crossed a broad river bed, but without water, only one expanse of sand. It was the same with all we had passed since we gained the Lugenda bank above Mtarika's. They can never be very deep at any time, though perhaps farther up their channels may be deep and shaded, as with those we passed farther from the river which had water flowing in them.

For several nights from October 11th a very high wind blew from the N. about an hour after sunset, and lasted from one to two hours. We had only one shower of rain since we started, and a very few drops fell on October 14th. Mr. Foster saw two lions on the 13th. I thought I caught sight of one on the 14th. At night we encamped opposite a village on an island apparently of no great size, but the chief of which seemed to be independent enough to be propitiated. The next day we walked for about seven hours. About three-quarters of an hour after starting we saw the river falling over rocks, but the fall was of no great height, and I suppose could hardly appear at flood time. There was a village of huts clustering about the fall. All glimpses of the river afterwards showed us a slow stream, filling only a small part of the channel, often flowing between wide expanses of sand. There were here traces of great numbers of elephants and other game, far more than at any other part of our journey.

We passed one deserted village on this day, but no inhabited houses from one hour after we left on the 13th until ten a.m. on the 16th, when we came to an Udonde village. Until now the people had been Yaos. In another hour we reached Namtusi, the place where last year the Sultan of Zanzibar sent a French civil engineer in search of coal, who stayed there some time to work it. The chief was away, and the people said they had no authority to show us the place, which was the other side of the river. I think the cause of this was that there was some soreness at the death of a man of influence amongst them at Zanzibar.

On the 16th we again passed through a district of houses and fields. We made from five and a half to six hours. On the 17th we expected to find a village at mid-day, but encamped after five hours' walk without passing another. It was the same in the afternoon, and after about two and a half hours' walk we pitched our tents for Sunday on what would be an island when the Lujenda is higher.

On the morning of the 19th I saw three sable antelopes, when I had diverged from the path a little, who were so surprised to see me that they stood and looked at me within fifty yards. After about two hours we at last reached a village, but it was empty, though with every sign of being inhabited. Just as we were leaving in despair of finding anyone to sell us food, the villagers began to arrive with sleeping mats, &c. At the false alarm of war shouted by a foolish man, who had fallen from a tree and broken his leg, they had all decamped the day before to Ngomano, at the confluence of the Rovuma and Lugenda. After buying what we could get, and walking for an hour, we halted for the night.

On the 20th, after another hour's walk, we saw the river had broadened out, and that the channel had become deeper and full of low rocks; and presently looking back, we could see the Rovuma flowing from the S.E. and meeting the Lugenda. About one quarter of an hour further on we found an island, on which was a temporary village, the Magangwara raids causing the people to live on islands at this time of the year. There we crossed the Rovuma in canoes, having walked the whole distance from the sources of the Lugenda to its junction with the Rovuma.

Susi tells me that when he came here with Livingstone all the country on the north bank of the Rovuma in this part was a succession of villages. Now no vestige of them remains—all is swept bare by the Magwangwara. We found that some islands were inhabited, but without careful search it was very difficult to discover it. Evidently all their dealings are with the other side away from the Magwangwara. They were too much afraid to send canoes with food to sell to our people. Their tribal name is Matambwi. It appears to be a small broken tribe allied to the Makonde.

On the 21st we made about six and a half hours. The hills along the bank are different in character to those we had before been passing, being wooded to the summits and much lower, but towards the end of the day they became more rocky and rugged and bare. Night after night now a high wind rises from the N.E., and lasts two or three hours.

On the 22nd we kept near the banks of the Rovuma through an uninhabited country, the river growing very broad, and at this time of the year showing a great expanse of sand. Cranes and pelicans, and the birds which frequent the larger rivers, began to appear.

On the 23rd, at midday, we left the river. During the last day or two days we had passed spaces of green grass, sometimes marshy, sometimes still containing water, evidently small lakes in the rainy season. They were close to the river. Up till now we had seen nothing of the kind—all was quite dry. On the night of the 22nd we had to move our camp for fear of a swarm of bees which were lodged in a vast baobab tree.

On the evening of the 23rd we slept at a Makua village, which I visited last year, and were generously welcomed by the kind old chief. When I arrived before the others, with the eagerness of one pressing towards home, he saw I was tired and hungry, and brought me some bananas. As I had not seen anything of the kind for weeks, it was the most acceptable present he could have brought.

The next day another old Makua chief, Macharika, who years ago acted as guide to Dr. Livingstone, hearing I was passing, hurried after me out of his village and gave me a warm welcome. At last, at midday, I reached Newala, and felt myself at home, after our long journey, with my friends there.

REPORT OF THE EDUCATION COMMITTEE OF THE MANCHESTER GEOGRAPHICAL SOCIETY, ON THE SUBJECT OF GEOGRAPHICAL EDUCATION, TO THE COUNCIL OF THE SOCIETY.

THIS Committee sent out the enclosed circular (Appendix A), and have received replies (Appendix B) from—

The Principal of Owens College, Manchester.
Two Professors at Owens College.
Nine Head Masters or Mistresses of Training Colleges, Training Schoo and Grammar Schools.
Six Head Masters and Mistresses of Middle-class Schools.
One Secretary of Teachers' Association.
Four Secretaries of School Boards.
Three Masters of Primary Schools.
Four Secretaries of Educational Institutions, Mechanics' Institut Unions, &c.
One Secretary of a Technical School.
Two Editors or Publishers of educational books (geographical).

The replies to questions 1, 2, 3, and 5 will be best seen in the detailed replies (Appendix B), and may be roughly taken to be summarised as follows:—

In reply to the first question, "*To what extent is geography taught in your school or institution?* (a) *How much time is allotted to it per week?* (b) *Also, is it taught as a separate subject?* (c), we find—

(*a*) The replies to this part of the first question may be shortly summarised by saying that geography is taught to all the children in the primary and middle-class schools; that it is not taught at all at one scientific institute.

(*b*) The time occupied for this special subject varies from six hours to 1½ hou per week, and may be said to average about two hours per week.

(*c*) And the subject is taught more or less as a separate subject in all the college and schools.

In reply to the second question, "*If any prizes are offered for proficiency in the subject?*" the result is as follows:—

In several colleges and schools marks are given for this subject in connection w English grammar and history, and a prize is given for the combined marks.

In others special prizes are given for proficiency in geography and for map drawing.

The Liverpool School Board has had a small fund provided, and out of that a prize of "£2 is awarded to each head master whose scholars pass in certain standards."

At one college a special prize (medal and books) are given.

In reply to the next question—"*The methods and appliances used in teaching the subject* (a), *and particularly what textbooks are used* (b), *also what other books or maps are either at the disposal of or are employed by the teacher* (c) *and the pupils* (d)"—

(*a*) There appears to be an almost total absence of any other appliances than maps and books. There are a few notable exceptions to this remark, where it would appear that the provision of appliances is ample. Globes, wall maps, blank projections, diagrams, sand, the use of the blackboard, pictures, and specimens of vegetable or mineral productions are mentioned in some of the replies. But looking at the answers to these questions as a whole, the conclusion forced upon us is that the appliances used are not the result of any systematised plan of the use of such things, but are rather the result of greater interest taken in the subject by different teachers.

(*b*) Almost every reply gives different books of varying quality, from the very worst to the best in the market. Some of the schools will be found well supplied; others have almost none. In several cases the teachers provide their own lessons, and in other cases Philips', Collins', Longmans' books, and series of a like kind, are provided for the use of the scholars.

(*c, d*) In only one or two cases is any provision made of a school library of books on this subject. One or two colleges and schools stand out in marked contrast to the rest in their ample provision in this respect, and mark a very distinct advance in the appreciation of the importance of the subject.

Question 4—"*What are the especial hindrances, in your opinion, to the thorough and scientific teaching of the subject?*"—has produced very full and sufficient replies. And first, what are the hindrances? The chief appear to be—

"The complete *isolation* of the several sections of the subject."

"The want of sufficient importance being attached to the subject at the universities and in schools generally."

"The number of subjects which it seems necessary to carry on simultaneously."

"The number of subjects in the code."

"The extent of ground covered in the examinations and the uncertainty of the questions likely to be set."

"The faulty Government requirements."

"The method of examination often adopted by H.M. Inspectors."

"Danger of 'over-pressure' in elementary schools."

"The shortness of school hours."

"The age at which children leave school."

"The difficulty to find highly-educated masters who will take a sufficient interest in the subject."

"Want of proper training on the part of teachers for giving instruction in geography, and want of a good knowledge of the principles of *cartography*."

"The superficial knowledge which the majority of teachers (especially the younger ones) have of the subject."

"Most pupil-teachers have been so badly instructed in the subject before entering college."

"The mechanical and bookish character of the instruction."

"Want of good textbooks."

"The absence of any suitable apparatus to illustrate the lessons."

"Want of good and sufficiently cheap physical wall maps and relief maps and models."

These replies appear to cover nearly the whole ground, particularly if in addition are taken the valuable remarks of the Principal of the Owens College, Professors Boyd Dawkins and Ward, Mr. S. Dill, the Rev. L. C. Casartelli, and of Messrs. Thornton and Vaughan. The methods and appliances used at the Manchester Grammar School, St. Bede's College, and at the Albion Educational Institute, are quite exceptional, and worthy of particular notice.

The remedies to be applied are various, but there appears to be general consent to the following conclusions, *i.e.*:—

That in the primary schools apparatus of a simple but scientific kind is required.

That a better class of maps, relief maps, models, and globes are required.

That a perfect textbook should be produced.

That it is useless to expect more time can be given to this as a special subject; but that, in connection with history (from which it cannot be divorced), it may, in its historical relations, be fairly dealt with.

That in secondary and middle-class schools and colleges more encouragement should be given to the study.

That if the subject were specialised at the universities by lectureships and other means, a body of competent men would in time be produced, capable of dealing with it, whose knowledge and interest in the subject would in time act upon the lower schools.

That we want some system of progressive education in this matter which, whatever the textbook, shall be progressive in its operation.

That if an examination in this subject and certificates for teachers could be obtained, a great advance in the interest in the subject would be secured.

That if a system of prizes could be formed (or the Royal Geographical Society's prizes obtained) by the Geographical Society, and if the University could be arranged with to form a body for examination in conjunction with the Society, and if, lastly, we press the attention of those concerned to the necessity of the science being taken as a whole, mathematical, physical, topographical, historical, and political, we shall have done something to place it in its proper and legitimate position.

The Committee have not attempted to classify the educational institutions which have replied to the circular. It should, however, be remembered that it may be in some respects misleading to consider collectively the condition of geographical teaching at places of higher, secondary, and primary education. The needs and methods of geographical teaching in a primary school are quite different from those in a place of higher education. In a college like the Owens College, or University College, Liverpool, where instruction is largely specialised, geography must hold a different place, even from that appropriate to it in a school of a high class.

APPENDIX A.

The following Circular Letter has been issued by the Educational Committee of this Society:—

MANCHESTER GEOGRAPHICAL SOCIETY,

44, Brown Street, Manchester, October 20th, 1885.

Sir,—In continuation and completion of the valuable report of Mr. J. Scott Keltie, made to the Royal Geographical Society, on the subject of Geographical Education, the Committee appointed by this Society to deal with the subject in this district respectfully request you to aid them by an early reply to the questions herewith forwarded.

The Committee propose to deal with the subject as early as possible in such a manner as may seem to them to be most likely to advance the question to some practical conclusion.

At the same time, permit me to enclose you a syllabus of a series of Evening Lectures to be given at Owens College this session.—Yours respectfully,

ELI SOWERBUTTS,

SECRETARY.

QUESTIONS.

1. To what extent Geography is taught in your school or institution, and how much time is allotted to it per week, also is it taught as a separate subject?

2. If any prizes are offered for proficiency in the subject?

3. The methods and appliances used in teaching the subject, and particularly what textbooks are used, also what other books or maps are either at the disposal of or employed by (*a*) the teacher (*b*) the pupils?

4. What are the especial hindrances, in your opinion, to the thorough and scientific teaching of the subject?

5. If an institution, What provisions have you for Geographical lectures?

APPENDIX B.

In response to this Circular Letter the following replies have been received from Colleges, Middle-Class and Private Schools, School Boards, Mechanics' Institutions, Societies, and others.

DR. GREENWOOD, *Principal of the Owens College, Manchester.*

Owens College, February 8th, 1886.

Dear Sir,—I have been asked to write something as to the provision which, in my judgement, might be made for instruction in Geography in places of the higher education.

A more complex subject can hardly be found among the sciences. Even if we set aside Mathematical Geography as being rather a branch of mathematics—although it might be contended that at least an elementary knowledge of this side of Geography should be imparted—we have, according to a common division, to deal with (1) Political Geography, (2) Physical Geography, (3) Commercial Geography.

1. The first of these branches, Political or Historical Geography, must, as all are agreed, be taught as a portion of, or at least in connexion with, History. Nevertheless, even here, some special training seems wanted in the art of interpreting maps and in their construction.

2. Physical Geography or Physiography, in like manner, is a branch of Geology, and may best be given by the lecturer or professor of that subject. Over and above this vital portion of Geography there is a province which may be said to be kindred to physiography, and which has not, I think, been duly considered—I mean that which deals with the *fauna* and *flora* of the several countries of the earth. This knowledge might, it is true, be given by the lecturers on zoology and botany. It is plain, however, that the student of Geography, as such, does not need so profound or so technical a knowledge of these subjects as is appropriate to the student of zoology and botany. He is in want of a summarised and connected account of them from the point of view of the several countries one by one, and to such a treatment I would give the name of "Descriptive Geography."

3. There remains Commercial Geography. In this difficult branch of the subject the study would, in my opinion, be best aided by a short course of directory lectures, pointing out the sources to which the student should resort for ampler detailed knowledge, and for information on some matters too slight to call for oral teaching, and yet important in their degree—such as the coinage and the weights and measures of the chief commercial countries, &c. Finally, short courses on important special branches of commercial geography should be given from time to time by exceptionally qualified lecturers as occasion offered.

I now come to the question of a professorship or lectureship in Geography. If what I have written is sound, it follows that very much of the instruction to be given in Geography should be given by the professors of history and geology, perhaps even by those of zoology and botany. But, in order to introduce method into this complex course of study, it seems to be desirable and even necessary that there should be a professor (or lecturer) of Geography, whose work would be (1) to co-ordinate the instruction given by the specialists enumerated above; (2) himself to lecture on the history of geographical discovery—on some portion, at least, of what I have called descriptive geography, and perhaps on the elements of mathematical geography; (3) to give the brief directory lectures spoken of under 3 above; and (4) to organise a system of examination on the several branches of the subject. The examination would, of course be conducted by him, and the special lecturers in concert, and certificates would be awarded on the results. He would also superintend a collection of maps and a small special collection of books of authority.

I think I have shown that there is ample scope for such a professor or lecturer.

PROFESSOR A. W. WARD, LITT.D., *Professor of History and English Literature at the Owens College, Manchester.*

Owens College, Manchester, October 17th, 1885.

Dear Sir,—In reply to your questions, I beg to state, for the information of the Committee :—

1. Geography is lectured on at Owens College. I leave Professor Boyd-Dawkins to state what is done with reference to physical geography. Political geography is taught in connection with history, both in the elementary and in the more advanced classes on various branches of that subject.

2. There is no special political geography prize. We had a temporary benefaction for this purpose some years since, but it has been long exhausted.

3, 4. In my opinion the proper method of teaching political geography in a place of *higher* education is to combine it with the teaching of history; nor do I advocate in a college or university special examinations in political geography apart from history. At the same time I think that the establishment of a lectureship in geography, combining the physical and political sides of the subject, might help to stimulate geographical study and research, and serve the ends for which the Geographical Society was founded. Isolated lectures are only distracting to students.

PROFESSOR W. BOYD DAWKINS, M.A., F.R.S., *Professor of Geology at the Owens College, Manchester.*

Owens College, Manchester, 9th January, 1886.

My dear Sir,—In reply to the questions of the Education Committee, I beg to forward the following answer, so far as relates to my share in teaching geography :—

The physical section of the subject is taught under the head of physiography as a separate subject in the Owens College, and is recognised as a separate subject by the Victoria University. The students are required to attend two lectures per week for one session, and these they are expected to follow up by the study of the collections in the museum and by reference to various works and maps. Details relating to this course will be found in the appended syllabus, A.

Physiography is in my courses used as a preface to the ancient history of the earth, or geology, and, in my belief—which is held also by the eminent professor of modern history at Oxford—should also be a preface to geography, political, historical, commercial.

In all the present systems of education in Britain the chief obstacle to the scientific teaching of geography is the complete isolation of the several sections of the subject. This, as I have already suggested in my letter published in the Report of the Royal Geographical Society, would best be removed by organising combined courses, in which the several sections are treated by those whose special business is to know them *at first hand*—for instance, as the courses now being given in the Owens College, of which I enclose a syllabus, B.

A

THE OWENS COLLEGE, MANCHESTER.

Syllabus of Lectures in Physiography, Geology, and Palæontology, by PROFESSOR BOYD DAWKINS, M.A., F.R.S., F.G.S., F.S.A., Hon. Fellow of Jesus College, Oxford.

I.—PHYSIOGRAPHY.

1. The Agents at work on and beneath the Surface of the Earth.
    - (*a*) The action of water—Rain and its work—Torrents and rivers and their work—The sea and its work; its temperature and its currents.
    - (*b*) Frost, snow, and ice—Glaciers and icebergs and their work.
    - (*c*) The atmosphere; its temperature and its currents.
    - (*d*) Chemical action in building up and destroying—The work of carbonic acid—The formation of caves and ravines in calcareous strata.
    - (*e*) Organic action—The work done by plants and animals—The secretion of carbonate of lime, silica, and carbon in their tissues.
    - (*f*) The phenomena resulting from earth-heat—Volcanoes and their work—Earthquakes and their work—Elevation and depression of land without the intervention of earthquakes—Folds and contortions.
    - (*g*) Mountain making and valley carving.
    - (*h*) Hot springs and their work.
2. The Distribution of Land.
3. The Distribution of the Mammalia and their evidences as to changes in Geography.
4. The Distribution of Man, and his advance in Culture.
5. The Earth in relation to the Heavenly Bodies.
6. The Ancient History of the Earth.

Text-books.—Huxley, *Physiography;* Geikie, *Physical Geography;* Lyell, *Principles of Geology.*

Books of Reference.—Angus Smith, *Air and Rain;* Tyndall, *Lectures on Heat;* Somerville, *Physical Geography;* Wallace, *Geographical Distribution;* Wallace, *Island Life;* Murray, *Geographical Distribution of the Mammalia;* Wyville Thomson, *Depths of the Sea;* Tylor, *Anthropology;* Lockyer, *Astronomy;* Dawkins, *Early Man in Britain.*

B.

THE OWENS COLLEGE, SESSION 1885-6.

COURSES OF LECTURES ON GEOGRAPHY.

The First Course, of Four Lectures, will be given at the College on successive Tuesday Evenings, beginning October 27th by PROFESSOR W. BOYD DAWKINS, M.A., F.R.S., F.G.S., on

"THE ANCIENT GEOGRAPHY OF BRITAIN."

LECTURE I.—TUESDAY, OCTOBER 27TH.

The Beginning of Britain.—Introductory—The relation of Geography to the History of the Earth and of Man—The method of inquiry—The British Area covered by the Sea in the Archaian Age—The Archaian Atlantis—The Archaian Volcanic and Marine Strata profoundly changed by heat and pressure before the Cambrian Age—Shrinkage of the Earth's surface before the Cambrian Age—The First Land in Britain in the Cambrian Age—The Orkneys—The Highlands—The Western Parts of Wales--The Cambrian Atlantis—The Silurian Land and Sea—Volcanoes—The Islands of the Welsh Borderland—Animals and Plants—The Mountains and Lakes of England, Scotland, and Ireland, in the Old Red Sandstone and Devonian Age—The Animals and Plants—The Sea covered the South.

LECTURE II.—TUESDAY, NOVEMBER 3RD.

The Growth of Britain.—The Lower Carboniferous Land and Sea—The Uplands of the North and West—The Alluvia and Morasses of the Upper Carboniferous Age—Britain extended southward to join the Continent—The break up of the land and the rise of the Pennine Chain—The Permian Land and Sea—The rise of the Mendip Hills—Triassic Britain and the Inland Seas—Rock-Salt—The Liassic and Jurassic Archipelago—The Cretaceous Land and Sea.

LECTURE III.—TUESDAY, NOVEMBER 10TH.

The Growth of Britain to the East.—Profound change in Geography and Life at the beginning of the Tertiary Period—Britain in the Eocene and Meiocene Ages—Connected with North America by Icelandic Barrier—The Land and Sea, the Mountains and Rivers—The Volcanoes—The Climate—Great Geographical change at close of the Meiocene Age—The Submergence of the Icelandic Barrier—Pleiocene Britain—The Severn and the Thames—Icebergs in the North Sea—The Geographical and Climatal changes in Britain in the Pleistocene Age—The Ice—The Boulder-drift—The arrival of Man.

LECTURE IV.—TUESDAY, NOVEMBER 17TH.

The Development of the Present Outlines.—The severance of Britain from the Continent, and development of the Present Outlines—Prehistoric Britain an Island—Britain in the Neolithic Age—in the Bronze and Iron Ages—At the time of the Roman Conquest—At the time of the English Invasion—The influence of "The Silver Streak" on our Character and National Development—Conclusion.

The Second Course will be given by the REV. J. P. WHITNEY, M.A., on "THE HISTORICAL GEOGRAPHY OF ENGLAND."

LECTURE I.—TUESDAY, NOVEMBER 24TH.

Connexion of History and Geography—Sense in which the latter is taken here—Objects of the Lectures—The relation of Englishmen to one another as affected by Locality—The External Circumstances of Life—Outline of Course—Knowledge of Early Britain—The Roman Empire and Britain—Ethnology—Names and Places.

LECTURE II.—TUESDAY, DECEMBER 1ST.

The English Conquest—Its Nature and Limitations—The Early Kingdoms—Counties and Dioceses—Later Changes—Wales—Scotland and Ireland—Their Divisions and Relations to England.

LECTURE III.—TUESDAY, DECEMBER 8TH.

Intercourse in the Middle Ages: apart from Commerce (treated in the next Course)—Travelling, especially in England—King's Journeys—Publication of Laws—Local Feelings and Differences—Pilgrimages—Their Social and Physical Effects—The Crusades—Travelling Scholars—Geographical Knowledge—Early Voyages—Illustrations from Chronicles, &c.

LECTURE IV.—TUESDAY, DEC. 15TH.

Descriptions of Mediæval England—Giraldus Cambrensis and his Works—Accounts by Foreigners—Statistics of Population, &c.—Chief Sources of our Knowledge—Alteration in Economic Condition towards the close of the Middle Ages.

The Third Course will be given by Mr. ALFRED HUGHES, M.A., on "COMMERCE AND THE COLONIES."

LECTURE I.—TUESDAY, JAN. 12TH.

Commercial Connexions of England up to the 15th Century—Main Routes of Trade—Trade with Flanders—And with the East—Foreign Merchants in England—Earlier Voyages.

LECTURE II.—TUESDAY, JAN. 19TH.

Increased Activity of Trade—Voyages of Discovery in the 15th and 16th Centuries, with their consequences—Maritime Enterprise and its connection with the beginnings of the Colonies.

LECTURES III. AND IV.—TUESDAYS. JAN. 26TH AND FEB. 2ND.

Growth of the Colonies—Settlements in India—In North America—Gradual Conquest of the former and Extension of the latter—Conflicts with Colonists of other Powers—The Colonial System—Changes in Commercial Policy—Chief Features of English Colonies and their Present State.

Admission by ticket only, which may be obtained at Mr. Cornish's, 33, Piccadilly, Manchester, from the secretary of the Manchester Geographical Society, or at the College. The lectures are open to ladies as well as gentlemen. The fee for the three courses is 10s.

J. G. GREENWOOD, Principal.

MR. SAMUEL DILL, M.A., *Head Master of the Manchester Grammar School.*

December 11th, 1885.

Dear Sir,—I have for several years laid great stress on the teaching of geography in this school, but the difficulty here, as elsewhere, has been to find highly-educated masters who will take a sufficient interest in the subject. Of late I have been fortunate enough to secure the services of such men. Mr. Alfred Hughes, formerly scholar of Corpus Christi College, Oxford, devotes his entire time to the teaching of geography in its different aspects, and all the boys on the modern side of the school pass through his hands. In the absence of any good textbooks, Mr. Hughes relies entirely on the proper study of maps, combined with such information or explanations as he may furnish himself. This treatment, of course, is graduated according to the age and proficiency of the boys. Mr. Keltie, on his visit here, found an average form able to produce in an hour a rough map of Asia, correctly drawn according to the lines of latitude and longitude, and this is a standard to which we expect the boys generally to attain.

In the higher forms Mr. Hughes gives great attention to the history of geographical discovery, commerce, and colonisation. With a view of stimulating curiosity on the subject we are making the geographical section of our school library as complete and interesting as possible.

I may add that Mr. Holme is teaching physical geography to certain forms on our modern side, with excellent results.

The school is supplied with a sufficient number of the best maps we can procure in England. It is needless to say that all practical teachers find our English maps very defective.

From this brief statement you will easily see that I rely at present chiefly on the enthusiasm and skill of the teacher developing his own method.

MISS ELIZABETH DAY, *Head Mistress of the High School for Girls, Dover Street, Chorlton-on-Medlock, Manchester.*

October, 1885.

1. About two hours per week in all classes below the fifth. For classes five and six it is an optional subject.

2. We have no prizes for any special subject.

3. *Books of Reference:* Stanford's Compendium of Geography (whole series); Wallace, Russia; Bird, Sandwich Islands, Golden Chersonese, Japan, Rocky Mountains; Palgrave, Arabia; Kingsley, At Last; Gardner, Brazil; Marryat, Jutland and Danish Isles; Palliser, Brittany and its Byways; Piazzi Smyth, Three Cities of Russia; Strangford, Eastern Shores of the Adriatic; Weld, Auvergne; Arnold, Through Persia by Caravan; Kinglake, Eöthen; Stanley, Sinai and Palestine; Thomson, Malacca and China, Five Years in Damascus; Porter, Giant Cities of Bashan, Letters from India and Cashmir; Layard, Nineveh and Babylon; Lindan, Japan; Jacob, Western India; Huc, Travels In Tartary; Hooker, Himalayan Journals; Trollope, North America; King, Mountaineering in Sierra Nevada; Lady Duff Gordon, Letters from Egypt (two series); Aimes, Morocco; Nordenskiold, Voyage of the Vega; Brassey, Voyage of the Sunbeam; Campbell, Log Letters from the Challenger; De Beauvoir, Voyage au Tour du Monde (3 vols.); D'Alviella, L'Inde et Himalaya; Richardson, Polar Regions; McClintock, Arctic Seas; Cooley, Maritime and Inland Discovery; Dilke, Greater Britain; Symonds, Sketches in Italy and Greece; Whymper, Scrambles Among the Alps; Besant and Palmer, Jerusalem; Carpenter, Six Months in India; Monier Williams, Modern India; Miss Manning, Ancient and Mediæval India; Hutchinson, Two Years in Peru; Bates, Naturalist on the Amazon; Chevalier, Mexico, Ancient and Modern; Havard, Hollande Pittoresque; Hare, Walks in Rome; Meiklejohn, Senior Geography and others; Somerville, Physical Geography; Guyot, Earth and Man; Maury, Physical Geography of the Sea; Wallace, Island Life; Ramsey, Physical Geography and Geology of Great Britain. *Maps:* Atlas of Modern Geography, Stanford; Harrow (Classical) Atlas; Royal Atlas, K. Johnstone; Atlas Antiquea, Kiepert; Historical Atlas, Pearson; Historical Atlas, Spruner; two relief maps (England and Ireland, France and Belgium), Berger-Walter; 43 Keith Johnstone's wall maps; three Kiepert's wall maps, classical; Sydon's Physical Map of Europe; two globes. As classbooks we use "Geographical Readers" (Nelson), Hughes's "Geography" (new edition), Geikie's "Primer," and Geikie's "Physical Geography."

4. The shortness of school hours and the number of subjects which it seems necessary to carry on simultaneously. In our lower classes we have only 16½ hours per week altogether, and two of those go in drill and one and a half in singing, leaving less than 13 hours for arithmetic, grammar, geography, history, reading, writing, spelling and French. In the upper classes the hours are a little longer, but the number of other subjects is much increased.

The Head Mistress of the Liverpool Training College for Women, Liverpool.

Liverpool Training College for Women, Dec. 11th, 1885.

Dear Sir,—In reply to the questions on your printed circular allow me to furnish you with the following particulars:—

1. Geography is taken up by the students as a separate subject, the syllabus followed being that set by the Education Department, and embracing, for students in

the first year of training, the whole world, and for students in second year the geography of the British Empire in great detail. If a student passes in geography at the end of her first year she is not obliged to take it up again in her second year, so that the geography class of second-year students includes a certain number, whereas all those of the first year take it for examination. The time allotted is about 5½ hours per week. It may also be remarked that many of the students are examined in physiography (South Kensington), which covers all that part of geographical science called physical geography; and to this branch several hours a week are devoted.

2. A prize is given yearly by the Training College for the highest number of marks attained in the subject during the school year.

3. The textbooks are:—

(*a*) For first-year students: Lawson's School Geography (each pupil has a copy) and Keith Johnston's Geography (of the London Series) by the teachers.

(*b*) For second-year students: Fannthorpe's and Hewitt's Colonies; Payne's Colonies. In physical geography the books more generally used are Huxley's "Physiography" and Geikie's "Physical Geography," with Lockyer's Astronomy Primer for what mathematical geography is required As to methods:—

(1) Oral lectures are given on a country, &c., before it is studied.

(2) Written exercises, *i.e.*, questions to be answered both in political and physical geography, are given abundantly, the pupils studying them fully before writing. There are also examination papers from time to time, and more special ones at the end of each quarter. Maps are taught and drawn from memory each week. Maps and Apparatus: Ravenstein's relief maps (small), photo-lithograph of Italy (Martin, Glasgow), large chromo-lithograph wall map of France (by Ebrard), Sonnenschein's blank linoleum maps, the *Cartes-muettes* of the Frères Chrétiens, large model for teaching geographical terms, &c., &c. An exceedingly good orrery for teaching seasons, eclipses, phases of the moon, &c. The students are also encouraged to make rough relief maps on boards with sand and liquid gum. They are very effective.

4. The chief hindrance in our own case—but this is perhaps too special—is that most pupil-teachers have been so badly instructed in the subject before entering college. Geographical study seems often to mean mere lists of names without any mental picture of the structure of a country, its climate, conditions, &c., &c.

I am, sir, with many apologies for having so long delayed my answer, yours truly, G. P.

P.S.—Guyot's Atlas of Physical Geography is much used.

The REV. L. C. CASARTELLI, M.A., PH.D., *Prefect of Studies at St. Bede's College, Manchester.*

St. Bede's College, Manchester, November 3rd, 1885.

1. *(a)* Taught in all the forms throughout the college. Time averages two classes per week, of three-quarters of an hour each.

(b) Taught as a separate subject.

(c) Range of teaching. (See enclosure A.)

2. *(a)* Yes. General:—Geography enters like any other subject into all competitions, such as the *daily marks*, and also the annual *form-prizes*, prizes for individual subjects not being awarded in any case*

(b) Special:—An annual competition, open to all students, for "The Prefect of Studies' Prize," medal, and books. (For details see enclosure B.)

3. (1) *Textbooks:* General geography used in all the forms, Gill's *Imperial Geography*, Philip's *Geographical Readers*. Commercial Geography in Forms V. and VI., Casartelli's *Notes on Commercial Geography*. For Lancashire, Collins's *County Geography, Lancashire*, by G. R. Emerson. (An unsatisfactory book, but the only one in the market.)

(2) *Maps:* A selection of maps are hung in the corridors and classrooms, and always used in teaching geography. (See enclosure C.)

(3) At disposal of (*a*) Teachers, any work on geography useful or necessary for preparing lectures. (A list in enclosure D.) (*b*) Pupils: In the reading-room, a case is set apart for books of travel and works of a geographical nature (about 50 volumes.)

4. (*a*) Want of proper training on the part of teachers for giving instruction in geography. Each teacher has, more or less. to experiment for himself and find out ways and methods.

(*b*) Want of a good knowledge of the principles of *cartography*, map-making and map-reading, and want, in England, of any means, such as good textbooks, for acquiring such knowledge.

(*c*) Want of good and *sufficiently cheap* physical or orographical wall-maps, and especially relief-maps.

(*d*) Multiplicity of subjects, rendering it impossible ever to give more time to geography than at present given.

A.—SYLLABUS.

PREPARATORY FORM.—Elementary notions—terms and definitions of divisions of sea and land. Reading an elementary geographical reader (Philip's), with illustrations. Topography of the neighbourhood.

FORM II.—Geography of Lancashire. Physical geography of British Isles. Special geography of England.

FORM III.—Europe as a whole. One European country (special). One non-European continent (general).

FORM IV.—The Indian Empire (special). One other British colony or possession. One non-British country, such as Central Africa, China, U.S.A., Brazil, &c.

FORMS V. AND VI.—The commercial and industrial geography of the world. One country specially treated.

FORMS IV., V., AND VI. together.—Lectures on physical geography (a three years' course).

**Examination prizes* can be obtained in four branches of subjects, viz., *Branch A, English subjects*, embracing reading, writing, spelling, composition, précis, English grammar, English literature, history of the English language, English by heart. *Branch B, commercial subjects:* Arithmetic, book-keeping, commercial lectures, and political economy. *Branch C*, humanities, ambracing the modern languages, Latin, history, *geography*, &c. *Branch D, Science and Art*, elgebra, Euclid, trigonometry, freehand and geometrical drawing, and vocal music.

B.—ANNUAL COMPETITION FOR PRIZE, AND SUBJECTS OF EXAMINATION.

1. A good general knowledge of geography, such as is to be found in Gill's *Imperial*, Casartelli's *Commercial*, or Levasseur's *Géographie Commérciale des Cinq Parties du Monde.*

2. A special knowledge of the countries on which papers have been read before the Manchester Geographical Society for the current year, and are reported in full in the *Journal.* Candidates are expected to be able to do sketch-maps.

3 An essay upon some geographical subject, to be announced some time before the competition.

C.—MAPS IN USE.

1. A View of Nature in all Climates. Reynolds.
2. „ „ Ascending Elevations. Reynolds.
3. World, Physical (Mercator). Keith Johnson.
4. „ Commercial „ „
5. „ in Hemispheres (large). Hughes (Philips).
6. „ „ „ Stanford.
7. Europe, Orographical „ „
8. „ Political „ W. and A. K. Johnson.
9. „ „ „ Hughes (Philips).
10. „ School Maps. "Sanctuary," 1880.
11. „ blank. Betts.
12. Caravan Routes, Ancient and Modern. Dr. Yeats, 1873.
13. British Empire. „ „
14. „ „ Stanford, 1885.
15. Dominion of Canada (very large Government map). Department of Railways, &c., 1882.
16. Dominion of Canada and Newfoundland (school map). Ruddiman Johnson, 1884
17. Australia. „ „
18. New Zealand. „ „
19. India. „ „
20. England and Wales, Political (large). Hughes (Philips).
21. „ „ „ W. and A. K. Johnson.
22. British Isles „ Hughes (Philips)
23. „ Physical and blank. Betts.
24. Scotland,
25. Ireland, Political. Hughes (Philips).
26. Lancashire, School. Collins.
27. „ blank. Ledsham.
28. Belgique. Bruxelles: Dosseray, 1884.
29. Africa. Keith Johnson, 1879.
30. „ School. "Sanctuary," 1880.
31. North America. School. „
32. South America. „ „
33. U.S.A. and Mexico. School. Ruddiman Johnson, 1884.
34. Asia. Bacon, 1885.

35-37 Biblical Maps. W. and A. K. Johnson.

D.—BOOKS AND ATLASES.

The following list may be useful. All these works are at the disposal of teachers :—

Dr. Yeats's works on commerce. 4 vols. Virtue.

Elisée Réclus, *Universal Geography*. Published in 12 large vols. Virtue.

The series of *Foreign Countries and British Colonies.* About 14 vols. Sampson, Low, and Co.

Karl André, *Geographie des Welthandels.* 3 vols. Stuttgart.

Bainier, Cours de *Géog. Com.* Only 2 vols. issued.

Levasseur, *Géographie Commerciale* and *Atlas.*

Bevan's *Industrial Geography Primers.* 3 vols.

Journal of the Royal Geographical Society.

Journal of the Manchester Geographical Society.

L'Exploration. Several vols.

Official Handbooks of Several Colonies.

Dr. Smith's *Geography of British India* (invaluable).

Textbooks for Colonial Geography :—
  Gill's *British Colonies* } extremely valuable.
  Hewitt's *British Colonies* } extremely valuable.
  Nelson's Royal *British Colonies.* Very useful.

Textbooks of Physiography and Physical Geography :—
  Huxley's *Physiography.*
  Mackay's *Physiography.*
  Hughes's *Physical Geography*, &c.

Works on statistics :—
  Mulhall's *Dictionary.*
  Brachelli's *Die Staaten Europas*, 1883-4.
  Hüber's *Geographisch-Statistische Tabellen*, 1884.
  Whitaker's *Almanack.*

Numerous books of travel.

Barrauld's *New Zealand, Graphic and Descriptive.* Large folio.

Johnson's Royal £5 5s. Atlas.

Johnson's Statistical Atlas of the United Kingdom.

Bevan's New Relief Atlas.

Letts's Popular Atlas. 4 large vols., &c.

REV. J. SEPHTON, M.A., *Head Master of the Liverpool Institute, Mount Street, Liverpool.*

Liverpool, 10th December, 1885.

Dear Sir,—In reply to your communications, I really have no information to give beyond what I furnished to Mr. J. Scott Keltie, who visited us last spring, in the course of his inquiries on behalf of the Royal Geographical Society.

MR. JOHN SUTTON, *Clerk to the School Managers, School Board, Manchester.*

St. James's Square, Manchester, 2nd November, 1885.

Dear Sir,—I have to acknowledge the receipt of your letter of the 24th ult., with reference to the teaching of geography in the Board Schools. In reply I have to state :—

1. Geography is taught in 62 departments of the Manchester Board Schools, in accordance with the syllabus of the Education Department. Usually between two and three hours per week are given to the subject.

2. No prizes are offered for proficiency in the subject, but a grant is paid by the Education Department to the Board.

3. It is taught by reading-books, oral lessons, and map drawing. The reading-books and textbooks are those published by the various publishers to meet the syllabus. Maps : Johnstons', Stanford's, National Society's, Reynolds's, &c.

4. Geography in elementary schools must be taught always in accordance with the syllabus of the Education Department, and there is a danger of "over-pressure" to meet the special mode of examination, and the possible exclusion of other important subjects.

MR. J. G. C. PARSONS, *Clerk to the School Board, Salford.*

Town Hall Buildings, Salford, November 16th, 1885.

Sir,—Adverting to your circular dated 24th October, containing queries with reference to the teaching of geography in Board Schools, I am directed by the School Management Committee to send the following replies for your consideration :—

1. Geography is taught as a class subject to meet the requirements of the Code of Regulations issued by the Education Department as specified in Schedule II. The time allotted varies from 1½ to 2½ hours per week.

2. Prizes are not given for proficiency in this or any other subject.

3. The method adopted consists mainly of oral instruction, and the lesson is, as a rule, illustrated by maps and diagrams, and sometimes sketch-maps are made on the blackboard during the course of the lecture. The books usually contain the work appointed for one Standard only, and are published at prices from 1d. to 6d. each. The children are also supplied with a geographical reader, the prices of which range from 8d. to 1s. 6d., according to the Standard. In addition to these, text-books for reference are provided for the head teachers, assistants, and pupil teachers, such as Ansted's, Hughes's, Cornwell's, Sullivan's, Gill's, Lawson's, &c.

4. The schedule of requirements of the Education Code being so difficult and exacting in the elementary subjects of the various Standards, it is seldom found desirable to devote more time to geography than will secure the grant. Moreover, in schools situated in poor districts, it is advisable to take one class subject only, and by the rules of the Education Department, "English," including grammar, must be taken as the first class subject. The age at which children leave school makes it generally impossible to attempt anything beyond the simplest elements of the subject.

MR. EDWARD M. HANCE, *Clerk to the School Board, Liverpool.*

Municipal Offices, Liverpool, November 10th, 1885.

Dear Sir,—I have pleasure in answering the inquiries contained in your circular letter dated the 24th October, as follows:—

1. In the Board Schools geography is taught to all boys from Standard I. upwards as a class subject for special examination by H.M. Inspector, the basis of instruction being the series of geographical readers published by Messrs. Longman and Co. In boys' schools about two hours per week are devoted to direct instruction in geography, but in addition the geographical readers are used as an ordinary reading-book, and the children may receive in this way about one hour and a half's geographical reading. The girls in Standard I. and upwards use the readers as a reading-book, and are expected to pass an annual examination in the matter thereof by the Board's Inspectors. About one hour and a half is allotted to the subject in this way.

2. A short time ago Mr. E. B. Sargant presented the sum of £100 to the Board for the purpose of encouraging the teaching of physical as well as political geography in its schools, and the Board decided to distribute the money in the following way, viz.: "A grant of £2 to be awarded to each head teacher whose scholars in Standard III. and upwards are reported—(*a*) In the case of boys, by H.M. Inspector, to pass satisfactorily in the Board's geography course; (*b*) in the case of girls, by H.M. Inspector or by the Board's Inspector, to pass satisfactorily in the Board's geography course; the awards to be made after the receipt of the Government reports on the examinations held in 1886." The Board offers no other special prizes in addition to this, but one of the scholarships connecting the public elementary schools with the Liverpool second grade schools, annually awarded by the Liverpool Council of Education, is given for superior attainment in history and geography.

3. As stated above, the instruction is based upon the geographical readers published by Messrs. Longman and Co., which were specially prepared with a view to introduction into this Board's Schools, and which are used by the teachers and pupils alike. Before these books were introduced the Board's science instructor made a collection of simple apparatus to illustrate the physical branch of the subject, and at the request of the Board delivered a special course of lectures to the head teachers as to the mode in which the subject could best be illustrated by means of this apparatus. In addition each school is supplied with a globe and compass, and with maps, Lehmann's geographical charts, Moffat's geographical illustrations, oleographs, and photographs. The geographical readers also contain maps and geographical illustrations.

4. Now that the above set of geographical readers, with suitable apparatus to illustrate them, has been provided, and the teachers have in the Board's science demonstrator the benefit of the assistance of a gentleman of considerable scientific attainments, there does not appear to be in the boys' schools of this Board any especial hindrance to the thorough and scientific teaching of the subject, as far as the Board's scheme is concerned; but the time that can be spared for the subject in girls' schools is inadequate to make them sufficiently acquainted with the work of the scheme. The general hindrances are in my opinion as follows: (1) The rarity and comparative costliness of any textbooks that can be said to deal with the subject in a thorough and scientific manner; (2) the absence of any special preparation to the teachers to deal with it in that manner; and (3) the absence of any suitable apparatus to illustrate the lessons.

So far as one can see at a glance the lectures,* of which you were good enough to send me a prospectus, cover the ground that the Board endeavour to include in their scheme.

MR. W. S. KINCH, *Chairman of the School Board, Crumpsall, near Manchester.*

December 27th, 1885.

Our schools having been opened only quite recently, a report on our experience would have no value.

MR. W. WARDALE, *Head Master of the Wesleyan Schools, Cornbrook, Manchester.*

Cornbrook Road, November 3rd, 1885.

1. To all children, boys and girls, from seven years upwards, three hours. Yes.
2. No.
3. Chiefly maps and globes; much map drawing on black boards and slates. Lessons oral. Children have atlases (Johnston's).
4. Want of raised maps; the faulty Government requirements; the method of examination often adopted by H.M. Inspectors of Schools.

MR. WM. WARDALE, *Hon. Secretary of the Teachers' Association, Manchester.*

Cornbrook Park, Manchester, December 14th, 1885.

Dear Sir,—I have delayed answering your note of the 4th instant until I could gather the opinions of more teachers. By far the greater part think as I do, that special hindrances to the successful teaching of geography in our schools are—

1. Want of good apparatus.
2. Methods of examination pursued by some of H.M. inspectors of schools.

MR. A. PARK, F.R.G.S. *(Author of "How I Teach Geography"), Head Master of the Albion Educational Institute, Ashton-under-Lyne.*

Ashton-under-Lyne, 28th October, 1885.

1. Six hours weekly, as a separate subject.
2. Yes.
3. The ordinary methods (*a*), maps, diagrams, models, charts, &c.; (*b*) classbooks written by myself.
4. The mechanical and bookish character of the instruction. Very little that is graphic, illustrative, or picturing-out enters into the teaching. Geography is made more a memory than a living, vivid, and humanising exercise. The classbooks used are constructed on similar lines.

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* The Owens College Course (*supra*).

REV. F. MARSHALL, *Head Master of the Grammar School, Almondbury, Huddersfield.*

Almondbury Grammar School,

1. Two hours a week each class.

2. £1 1s. prize yearly.

3. Cornwell's Geography, Hughes's Physical Atlases, each pupil. Large wall maps.

4. Boys have too many subjects to do and too little time to do them (*i.e.*, they leave school too early).

5. None.

MR. THOMAS R. JOLLY, *Secretary to the Harris Institute, Preston.*

Not taught at The Harris Institute, Preston.

THE HEAD MISTRESS, *School of the Convent of Our Lady of Loreto, Hulme.*

1. Geography is taught throughout my school from the junior classes to the most advanced. Each class receives two hours' instruction weekly. In junior classes the time is divided into four lessons, in senior into three. It is taught as a separate subject.

2. Two prizes are awarded yearly in each class—one for proficiency in geography and one for map drawing.

3. Methods: A lesson is prepared by pupils from textbooks, which is orally explained, expounded, and illustrated by the teacher. Appliances: Flat and raised maps, globes, diagrams, the tellurion, blackboard illustration, engravings of notable places or physical phenomena, specimens of vegetable or mineral productions. Textbooks: Political, Junior Classes, Horn and Gill; physical, Snaith. Political, Senior Classes, Mackay's Senior Civil Service; physical, Geikie and Macturk; mathematical, Scott, Teachers' Reference Library: Ansted, Clyde, Cornwell, Hughes's Treasury, Herschel, Keith. Pupils have access to the above.

4. A more thorough treatment is impossible as long as so many branches of study must be cultivated during the short school year.

5. Geographical lectures are given each term, accompanied by magic-lantern illustrations.

MISS M. J. MILWARD, *Head Mistress, Liverpool College for Girls, Grove Street, Liverpool.*

Liverpool, December 19th, 1885.

1. Geography is taught as a separate subject, two hours per week throughout the school.

2. Prizes are offered annually in each class.

3. Lessons are given in the form of lectures, with the help of large wall maps, including blank maps, diagrams, blackboards, globes, sand, &c. Cornwell's Geography and the Public Schools Atlas are used by the pupils. The teachers have access to

various works, amongst which are Keith Johnston's Historical and Descriptive Geography, and the six volumes of Compendium of Geography and Travel, published by Stanford, besides numerous small books, such as those written by Blackiston, Green, &c.

4. The greatest hindrance, in my opinion, to the thorough teaching of the subject, is the want of teachers who have made geography their special study. This want is, I think, caused by the fact that sufficient importance is not attached to the subject at the universities and in schools generally. Thus, no inducement is held out to teachers to devote themselves to the study of geography. There is also great want of a good textbook to put into the hands of pupils.

Rev. BEN. WINFIELD, B.A., *Head Master of the Manchester Commercial Schools, Stretford Road, Manchester.*

1. Two hours as a separate subject in school, one hour as evening lesson.

2. Prizes offered for English grammar, history, and geography combined.

3. Gill's Imperial Geography, Gill's O. and C. Local Geography, Nelson's Geograpny and Atlas, Johnston's wall maps, diagrams of physiography, globes. Method: Oral instruction and textbooks.

4. (1) Number of subjects required for modern education. (2) Extent of syllabus laid down by public bodies for examination of pupils.

5. Pupils prepared for Science and Art Examination in physiography.

Mgr. A. J. DE CLERC, *Head Master of the Catholic Grammar School, 43, Crescent, Salford.*

Salford, 9th December, 1885.

My Dear Sir,—I am sorry that you have had to write a second time for your geographical information, but I thought that I could not add anything to your accumulated stock of information, and therefore I kept silent.

I find that my scholars do fairly well in geography with about two hours a week in the lower classes; with one hour, supplemented by another hour of physiography, in the middle classes, and with one hour in the higher classes. I find that the drawing of maps and the description of journeys help the pupils very much.

Mr. J. HOWARD, *Head Master of the Catholic Grammar School, Preston.*

December 17th, 1885.

Dear Sir,—Your letter to hand. Many thanks for the syllabus. Geography is not taught to any great extent at this school, but still the subject *is* taught, and that separately. Our textbooks are Horn's, Laurie's, Spense's, &c. We make great use of maps, and the students draw maps frequently.

Mr. A. WALTON FULLER, M.A., B.Sc., *Head Master of the Chorlton High School, Rumford Street, Manchester.*

Manchester, October 27th, 1885.

Sir,—In reply to the circular from the Manchester Geographical Society, I beg to submit the following answers:—

1. Geography is taught as a separate subject to each of the five classes in the and the school, total number of lessons given per week is 10—five lessons of 45

minutes each, five of one hour each. About half an hour's home preparation is expected for each lesson.

2. No prize is awarded for geography alone, but in each class a prize is given every year for English. The subjects are English history, grammar, and geography, and each subject has the same number of marks allotted to it.

3. The textbook for home preparation is Gill's "Oxford and Cambridge Geography." The atlas used is Philips' "Elementary Atlas for Beginners." There are in use numerous large wall maps published by the Society for the Promotion of Christian Knowledge and others. These are now being supplemented by the "Excelsior" series adopted by the London School Board. I myself give the geography lessons to the three upper classes, and I find that constant repetition, regular use of wall maps, the filling up of outline maps, and the use of the blackboard are all required. As works of reference, I make use of Gill's "Imperial Geography," Hughes's "Classbook of Physical Geography," Francon Williams's "Geography of the Oceans," Lyell's "Principles," &c.

4. One great hindrance to the proper teaching of geography is, in my opinion, the range of subjects expected in modern examinations; all which subjects must be taught in some 30 lessons per week. And another hindrance to the regular systematic teaching of geography, I think, is to be found in the extent of ground covered in an examination. The uncertainty attending the nature of the questions likely to be set causes many to throw aside the study of geography for subjects which pay better in examination. I think that anything which can be done to make geography a more popular study will be beneficial to those who prefer teaching to mere cramming for examinations; and there is hardly any branch of knowledge which can be made more interesting to boys.

MR. J. HOWARTH CLARK, F.R.G.S., A.C.P., *Head Master of the Cheetham Collegiate School, York Street, Cheetham, Manchester.*

Manchester, October 30th, 1885.

Dear Sir,—In reply to your circular on the subject of "Geographical Education" I beg to enclose a few short replies, given *seriatim* to the questions forwarded.

1. One hour per week per class is devoted to geography, and it is taught as a separate subject.

2. No prizes are given for this subject separately; but it forms one of a series for which prizes are given.

3. During the one hour mentioned above the subject is taught orally by the aid of large wall maps and the blackboard. The textbooks used by teacher and pupil are by various authors, Dick, Hughes, Page, Horn, Chambers, &c.

4. The teaching of geography would be more successful if *people* were studied *with places.* Most of the maps, and many of the textbooks make the subject solely a feat of memory.

MR. LEONARD H. EDMINSON, *Head Master of the Old Trafford School, Manchester.*

Manchester, November 24th, 1885.

Dear Sir,—In reply to your favour of the 24th ult., I beg to say that I have only had charge of this school since September. Mr. Sharp has left Manchester on account of his health and will not resume active work. After Christmas the school will be in my hands. I mention this so that you may see that the report I give in answer to the questions submitted refer to the past rather than to the actual present of the school. I am much looking forward to the recommendations of your committee as a guide for the future in this important subject.

1. We have allotted four hours per week to the teaching of geography. Of course it has been a home lesson, taken up and explained in school hours. It is taught as a separate subject. We have this term taught, as a new departure in this school, the main arteries of our English railway system, and have made a wall-map specially for this branch. Teaching from blank maps has always been the rule here.

2. No special prize has ever been offered for this subject, as far as I know.

3. Method, appliance, &c., wall-maps with names printed and wall-map without names. Small maps which the boys have filled in from memory. Drawing of outline maps from memory, &c. Atlases, textbooks (lower form), "The Scholar's Geography for Use in Elementary Schools," by J. S. Horn. Upper forms—"Geography," by James Cornwell. (Simpkin and Marshall.) "Geography," by James Clyde. (Edinburgh: Oliver and Boyd.)

4. I should wish for a little more experience in teaching this special subject before replying to this question; but say generally that the lack of thorough interest in geography is largely due to the want of interesting textbooks to give life and reality to the subject. Boys are too often burdened with merely learning a list of capes, tributary rivers, exports and imports, whilst they learn next to nothing of the condition of the peoples of the various countries, and very little of their history. The effect, too, of geography upon history is seldom pointed out. I have thought that a short primer on almost every country would be a great aid to the learning of geography. We need, too, more raised maps and models. I trust I may have a copy of the committee's final report.

Mr. T. HALL, M.A., *Head Master of the Bowdon College, Bowdon, near Manchester.*

Bowdon, October 28, 1885.

1. Two classes weekly, each three-quarters of an hour, with preparation for ditto, and mapping about half an hour each time.

2. No.

3. Clyde's "Geography," Cornwell's "Geography" (very unsatisfactory this, but difficult to replace), with Geikie's "Physical Geography," and others; small books published by Nelson in junior classes; blank maps of Europe and England and Wales; globes; sundry books of travels.

4. Chiefly the vast extent of the subject, especially when physical geography is included; also the fact that very few teachers know the subject well—indeed, to do so requires almost that a man should study nothing else. A good textbook is sadly wanted. Cornwell's is a wretched book, crammed with errors and antiquated statements; and Clyde is too full, though an excellent book. The small Clyde (1s. 6d.) does not answer the purpose; it is too dry.

MR. J. S. THORNTON, B.A. *(London), Head Master of the Victoria Park School, Anson Road, Manchester.*

Manchester, Jan. 28th, 1886.

Dear Sir,—In answer to your questions I have to say :—

1. That two lessons a week are given in geography, and that no further time can be given without pushing out some other subject equally important.

2. No special prize offered for geography, but the marks for it, as those for other subjects, go to swell the total, which decides to whom the class prizes shall be given.

3. For junior classes we have used the "Gem Geography" (England and Wales), and find the course of map drawing it gives useful and practicable. For higher lasses we have used "Dick" and "Gill's Imperial Geography." In lower classes, 'Geikie's Physical Geography Primer" has been found very useful. I know nothing so good on the same subject for higher classes, unless, indeed, the publishers could be induced to issue "Huxley's Physiography" at a price suitable for schools. We have six or seven relief maps by Bauerkeller in constant use, including one of the Rhine from Mayence to Cologne, in high relief. Kiepert's wall maps of Ancient Greece, Italy, and the Environs of Rome are, of course, indispensable. In reading "Cæsar" I always have by me "Alb. von Kampen's Atlas," the maps of which can be had separately. It is sometimes useful to give each boy a copy of some particular map. Occasionally the upper classes, with the help of "Heywood's Map of Lancashire," go through "Hughes's Geography of Lancashire," which, however, is too short to be interesting. But what we really require is not so much a map and geography of Lancashire as of the forty miles round Manchester. Could the publishers not give us for school use something corresponding to "Aitkin's Description of the Thirty or Forty Miles Round Manchester"?

4. Let me answer a question by a question. Could not the Royal Geographical Society institute a Teachers' Geographical Diploma, to be gained by passing an examination in prescribed subjects? Any principal choosing an assistant would at once know what value should be assigned to such a diploma, and a single teacher possessing such a guarantee of his ability and acquirements would at once raise the tandard of geographical teaching in a school.

5. I should be glad to arrange for geographical lectures if I knew of any thoroughly competent gentleman who would give them at a reasonable rate, and more particularly if they were illustrated by photographic slides. If the schoolmasters of the city and neighbourhood could co-operate to procure something of this kind, much might be done to render the study of geography at school more interesting.

Mr. H. VANNAN, M.A., *Head Master of the Britannia College, Whalley Range, Manchester.*

Manchester, January 25th, 1886.

1. We teach geography, as it is usually done in schools, under the heads of physical and political. The time varies according to the class ; perhaps the average would be somewhat over two hours weekly. It is taught as a distinct subject.

2. Prizes are awarded in two ways. For the best set of maps drawn by the pupil in the course of the session ; for proficiency as tested by terminal written examinations, and class places, *i.e.*, oral questioning before the map.

3. We use Nelson's and Collins' series of Geographical Text-books. Our maps are various, but on the whole, for teaching purposes, I prefer those of W. and A. K. Johnston. I believe strongly in map drawing, and enforce it in the elementary as well as the advanced classes. It is to geography what writing to dictation is to spelling. The memory is stored through the eye, and this memory is a tenacious one, being founded on association, whereas simply committing to memory by rule the usual number of names, &c., may be regarded as almost useless. Much good is done by short lectures on some particular portion of the map, *e.g.*, an island or country, having some special features. If the teacher sustain the attention of his pupils through eye and ear, the lesson is for that day a success, and they will retire with a sharp mental picture, localised for life and associated with information they will probably never forget.

4. The acquiring of geographical knowledge is necessarily a slow process, and would require more time than in these high-pressure days, with so many subjects to be gone over, the ordinary teacher is able to devote to it. The memory is not sufficiently cultivated in this subject. The teaching is too desultory. We have rebounded in disgust from mere rote learning, and we have gone to the opposite extreme, with the result that children leave school oftentimes with the most vague and indefinite notions of geography. Judging by one's general experience, this is for the most part seldom to any great extent remedied in after years, and I feel confident, even in the latter end of the nineteenth century, and with all the educational advantages it has conferred, that were a geographical "Bee" improvised in any of our drawing-rooms, amongst a mixed company of the ordinary type of "well-educated" ladies and gentlemen, and the test limited to our own snug little island, the position to which towns and rivers would be relegated—unless perhaps the most notable—would be, to say the least of it, an amusing disclosure to the company and the individuals. We lose sight of the fact that for the average pupil geographical knowledge, generally speaking, is a collection of facts very much after the manner of history, with which, indeed, by association, it is closely connected, and that the memory, rightly employed and aided by the eye, is practically all we have to rely on. The teaching is not made sufficiently thorough, and this because it is considered necessary that children, by the time they are fourteen years of age or thereby, should have been dragged round the whole circle, and, more than that, should know it all; whereas a general outline of the globe and a definite and minute acquaintance with some of the best-known portions of it are all that can, under skilful teaching, be mastered by that age. Again, the subject is often taught without any attempt being made to *interest* as well as instruct. No doubt it is true that dry and uninviting lists must be committed, but the thoughtful educator will always find a central point in his lesson upon which to fix the attention of his class, meanwhile conveying to them some interesting information or describing the appearance of the places (when possible) from his own personal observation. And this leads me to say that while travelling about is the best way to learn geography, no teacher can put so much reality and attractiveness into his teaching on this subject as he who describes what he has himself seen. I have often watched the faces of a set of boys when I have been induced to make a little digression and spend a part of the time in a short lecture on such a place as Iceland, for example, with the map of Europe before us, and all supposably setting out upon our voyage of discovery from the nearest port to our own town, or it might be that the point fixed upon was Vesuvius, with Pompeii at its base. In either case, although I know that I was not credited that day with having "heard" all the lessons, yet I saw from the breathless attention with which I was listened to, and the eager and interested glances directed to the map, that my labour had certainly not been in vain.

5. None but what have been incidentally alluded to already as forming a part of the ordinary class teaching.

N.B.—The foregoing remarks are made from the standpoint of a teacher dealing with the subject of geography among classes of boys from seven years of age to seventeen, and, although written somewhat hastily, are conclusions drawn from many years' practical experience.

MRS. WILLOUGHBY, *Higher School for Girls, Higher Ardwick, Manchester.*

January 29th, 1886.

1. Geography is taught in this school simply as part of the usual study. There are no extra classes, nor any connection with the Science and Art Department or any other society, upon the syllabus for this year. Two hours a week are set apart for geography, viz., from 11 to 12 a.m., on Tuesdays and Thursdays.

2. Two prizes are offered yearly (one in each of the upper classes) for the best use. Every few weeks there are questions given on the blackboard, to be answered by the pupils, relating to the lessons of the last month, and the map of the continent which is being studied. One continent occupies the school for a half year, and the examination questions are confined to what has been stated during the last half. They are twelve in number, given by the teacher or any competent person who will volunteer to give them. The pupils are divided into two classes—the seniors, who are expected to answer all the questions, and the juniors, who only attempt half. The teacher decides to which class any pupil shall belong. The examination is conducted on the same principle as in public schools, and in the same manner. Thursday mornings are devoted to map drawing. The seniors draw their own projection and enlarge the maps from Atlases (Heywood's or Philip's); the younger pupils use map books with outlines and projections, or projection only as the case may be. The whole school uses "Blackie's Geographical Reader," in various Standards, at least three times a week.

4. Do not know of any hindrance to the thorough and scientific teaching of geography any more than any other subject, except want of time and the number and variety of subjects put before the children during the few years they are allowed for education.

5. There are no other arrangements for geography in the syllabus except what are given in the answer to the previous question.

Mr. EPH. HARRIS, *Head Master, Manchester Jews' School.*

1. Each class has four hours per week, taught according to the syllabus of the Educational Code.

2. No special prize.

3. Wall maps, globe, Nelson's Geographical Readers, atlases for homework.

MR. J. H. REYNOLDS, *Secretary Manchester Technical School and Mechanics' Institution, Princess Street, Manchester.*

28th October, 1885.

Dear Sir,—I have pleasure in replying to your queries :—

1. In the curriculum of the Boys' Manual Training School and in that of the Commercial Evening Classes special arrangements have been made for instruction in

commercial geography and history, two hours per week being given to the subject in each department.

COMMERCIAL GEOGRAPHY (Tuesday, 8-30 to 9-30). The course will include—

(a) The study of the principal home and foreign places where trade is carried on, and the nature and extent of the imports and exports characteristic of each.
(b) Distances, routes, means of communication, and modes of transit or conveyance to important markets.
(c) Different currencies, weights, and measures, and their English equivalents.
(d) Physical geography as affecting trade.

COMMERCIAL HISTORY (Monday, 8-30 to 9-30). This will comprise:—

(a) The growth and vicissitudes of commerce.
(b) The modes of commerce practised between nations.
(c) The effects of commerce on the social condition of mankind.
(d) The comparison of the burdens and resources of modern states.
(e) Industrial developments, inventions, and discoveries.
(f) The principles governing the production and distribution of wealth.

2. We have no scheme of prizes, but such of the evening students as may desire it are sent in for the examinations of the Union of Lancashire and Cheshire Institutes in commercial geography and history.

3. We find an almost complete dearth of good and cheap textbooks dealing with the subject. Casartelli's "Geography of Commerce" is used (but its information on many points is out of date), as well as Yeats's books on the History and Geography of Commerce. Special maps are prepared in the school, drawn with coloured chalks on large sheets of black paper, with a view of bringing before the pupils the latest discoveries, and for the purpose of showing trade routes and other means of communication. These are, of course, in addition to the ordinary maps in general use.

4. There is a lack of real interest in the subject—a want of knowledge on the part of teachers, together with a failure to grasp its vital importance, affording another evidence of the unpractical character of much of our methods and aims in education. Since there is little demand there is an almost entire absence of trustworthy books and maps showing the history, nature, and course of our outward and inward trade. The study of science fostered by the Science and Art Department has led to an enormous increase in the attention paid to the subject, to the production of admirable textbooks, and to the creation of a staff of trained and well-informed teachers. I am of opinion that to a nation like ours, with its complex commercial relations in all parts of the world, and from the stern necessity, in face of protective tariffs, of finding new markets, the study of commercial subjects is no less vital—that it therefore needs similar recognition and support. Only then will such subjects take their due place in our schemes of education. We must make it worth the while of the teacher to teach and the scholar to receive—grants for successful instruction, prizes and certificates for the student. I should like to see a scheme of teaching in subjects of commercial knowledge somewhat akin to that indicated in our syllabus, but carried on under the auspices of some public examining body—if not the State, then such, for example, as the Chambers of Commerce. Some years ago I wrote the Chamber of this city invoking its aid in this respect, but received no countenance, as the subject was declared beyond its province. I am inclined to think if such a body did no more than express its intention to conduct examinations, and let it be known that the certificate of the Chamber in commercial knowledge would be a passport to appointment and advancement, that a very great stimulus to the study of commercial subjects would be the result. Under sufficient inducement to teach, books, appliances, teachers, and good methods would necessarily follow. As a practical suggestion, I

venture to submit the following, so far as commercial geography and history are concerned:—

'(1) That the Chamber of Commerce be induced to offer a medal, book prizes, and certificates on the subjects of commercial geography and history, the examination questions to be prepared and the awards made by the Manchester Geographical Society; or,

(2) That the Manchester Geographical Society institute an examination on these subjects, offering prizes and certificates (beyond that, I presume, with its present limited means, it could not go). Such a society, by its examinations, could, in a large measure, determine the standard of the teaching, and would be likely to maintain it at a high level.

I would further suggest the loan of good maps to classes formed for the purpose of studying commercial geography in connection with the society.

MR. J. CORBETT, *Hon. Sec. to the Working Men's Clubs Association, Oxford Chambers, Manchester.*

October 27th, 1885.

Dear Sir,—I reply to your printed questions *seriatim*:—

1. We offer to working men's co-operative or trade societies, &c., gratuitous lectures on many subjects, including accounts of travels and some directly geographical lectures, as shown in enclosed list. These lectures are receiving a good demand, already about ninety being arranged for this winter, and probably the demand will rapidly increase.

2. No prizes are offered.

3. We have a circulating library, including popular books on travels, explorations, &c.

4. As our lectures have to be made attractive in order to induce weary workmen to attend them, the chief hindrance to effective lectures on geography is probably the cost and trouble of providing drawings, samples of products, &c., which would enliven the oral teaching.

MR. JOHN PLANT, F.G.S., *Hon. Sec. Salford Working Men's College, Great George Street, Salford.*

1. The geography taught in our school embraces the definitions, British Isles, and Europe. The time usually devoted to the subject is about two and a half hours per week. Geography is taught as a separate subject.

2. One small book prize is offered each year for proficiency in geography.

3. Methods of teaching: (1) Oral lessons. (2) Through reading lessons. (3) Mapping, drawn in ink by the pupils. Appliances used in teaching: Wall maps. Blank maps to be filled by the boys. Reading-books (geographical). Small text-books (Gill's series.) Atlases. Cornwell's Geography used by teachers.

4. One great hindrance to the thorough and scientific teaching of geography is the superficial knowledge which the majority of teachers have of the subject. This especially applies to the younger teachers (who have to do the bulk of the work), many of whom know very little more than what is contained in the small textbooks. (2) Another hindrance is that the number of subjects in the Code is so large that, under the present *régime*, more time cannot be given to geography without endangering the grant in other directions.

MR. C. M. FODEN, *Hon. Sec. Mechanics' Institution, Burnley.*

December 12th, 1885.

Dear Sir,—Please accept my apology for not replying to your circular earlier. We have no specific classes for the teaching of geography, nor have we any special apparatus beyond ordinary maps. The subject does not receive the attention that I consider it deserves, and we are hopeful that something better may soon be done in this direction.

MR. BENJAMIN BOLTON, *Hon. Sec. Bury Athenæum.*

1. Not taught at all.
4. We should be glad to include this subject in our next syllabus.
5. No.

From FRANK CURZON, *Secretary of the Yorkshire Mechanics' Institutes Union.*

Leeds, February 10th, 1886.

1. The teaching of Geography in our Mechanics' Institutes is utterly inadequate. The only examinations held are those in March every year, when questions are set by the Society of Arts. Geography is then coupled with history, and one night is given to the examination. The Institutes have six months' notice of the intention to examine on these subjects, and the evening classes have their attention directed to them, but in no sufficient or regular manner.

2. Prizes are offered by the Yorkshire Union for a combined examination for three nights in arithmetic, geography, with history and English.

3. It would be wrong to say that there is any method that deserves the name for teaching geography.

The textbooks are never separate manuals, but the usual classbooks adopted by teachers under the Code are used, and these classbooks are devoted to a number of different subjects. The maps on the walls of the Institute, where there are any maps, are few and obsolete.

4. The special hindrance is that the Government have no system of secondary education, and the teaching of Geography on any thorough or scientific basis is not encouraged.

5. Almost the only geographical lectures ever given in the Yorkshire or Durham Institutes are those given by the organising secretary, and these are of a popular character, the aim being to interest the imperfectly-educated audiences in the localities in which they reside.

From J. F. WILLIAMS, F.R.G.S., *Editor of* Messrs. G. PHILIP AND SONS *Geographical Readers, Caxton Buildings, Liverpool.*

Caxton Buildings, Liverpool, August 11th, 1885.

Gentlemen,—I have the honour to forward for your inspection a copy of one of the most extensively used textbooks of geography, originally written by the late Professor Hughes, and recast and extended by myself. Mr. Scott Keltie has in his admirable report drawn a graphic picture of the extremely unsatisfactory state of geographical teaching in our schools. One reason of this is undoubtedly the all-but total non-recognition of the subject among the advanced branches of study, and I am afraid that nothing much will be done until that supreme engine of all change and progress—public opinion—is thoroughly aroused. In the meantime, however, we should utilize to its fullest extent all available means to divest the subject of its usual sombreness. To effect this, the formal study of textbooks (which, after all, are indispensable if definiteness and accuracy are to be attained during the comparatively short school life of the great majority of pupils) should invariably be supplemented by the collective reading of Geographical Readers, brightly written and well illustrated. In the series of Geographical Readers which I prepared, with the aid of several well-known and accomplished writers, for Messrs. George Philip and Son, the characteristic features of the German Heimatskunde (see Mr. Keltie's report) are embodied, more especially in the earlier books, which are designed as much for the guidance of the teacher as for the instruction and education of the pupil. Everything that could in any way enhance the educative value of these books has been done, and should you, after strict examination and comparison, find the series worthy of commendation, it will greatly encourage my colleagues and myself, and be a valued proof of appreciation of our labour and anxiety.

I also desire to draw your attention to a little Map-Drawing Book that we have recently issued, and which meets the idea in Mr. Keltie's report (p. 91) in that it contains "nothing which an intelligent boy might not reproduce with accuracy."

The small Grammar School and Standard Atlases forwarded are designed mainly for copying and making rough sketch maps, &c.—Waiting your reply, I am, gentlemen, yours obediently, THE EDITOR.

The Education Committee of the Manchester Geographical Society.

MESSRS. MACMILLAN & CO., *Publishers, London.*

That geography has not yet attained in this country the position which its real value as a means of education entitles it to hold may be traced to various causes. To overcome the obstacles in its way, and to surmount the indifference of the long use and wont which has kept it in its present position of degradation, will not be accomplished in a day . . . One of the chief difficulties . . . is that, through no fault of their own, teachers have comparatively seldom been taught to know what geography really is, and they need therefore to be themselves trained in the art of teaching it. The first principles of geography, however, cannot be effectively taught from books. They must be enforced practically from familiar local examinations. The first endeavour of the teacher should be to lay a solid geographical basis, founded upon the pupil's own personal experience, and not until some progress in this respect has been made can he expect to make advantageous use of a class-book. The first book, therefore, in a series of works intended for effective geographical teaching, should be one for the teacher, full of suggestions and illustrations to aid him in his work of oral instruction. For the pupils, the earliest geographical lesson-book put into their hands should be one that will take up their training at the point to which the oral lessons and demonstration of the teacher have brought them. It should deal with their own country, carrying out the same kind of instruction to which they have already become accustomed. Afterwards class-books treating of other countries and continents, of the world as a whole and of its planetary relations, will be reached. Throughout such a series of geographical class-books the fundamental idea should be to present the essential facts in such a way as will show their relationship to each other, and will convey to the mind of the pupil a clear picture of the country or subject described. For instance, the physical features will be connected with the climatology of a country, and both will be shown to affect the distribution of life, while the bearing of all these influences upon human history and commercial progress will be constantly kept in view. The boundaries of parishes and countries, the positions of towns and the diffusion of population, will be linked with their geographical explanation. A knowledge of the topography of a country, and of the local names by which it is expressed, will be shown to be the necessary accompaniment of an adequate knowledge of the history of the inhabitants. In short, it should be a constant aim to represent geography not as a series of numerical tables or a string of disconnected facts, but as a luminous description of the earth and its inhabitants, and of the causes that regulate the contrasts of scenery, climate, and life.

APPENDIX C.

The following article, "On the Place of Geography in Education," by the Rev. E. Hale, M.A., F.R.G.S., Assistant Master at Eton, read before the British Association in 1872, and extracted from the Proceedings of the Royal Geographical Society, is of so interesting a nature that the Council believe they are doing a service in reproducing it:—

I am a schoolmaster—seeking rather for information than able to give it—hoping to awaken such interest in others who are skilled in scientific learning that they will give the benefit of their ideas and more impartial judgment to its professional teachers, who are the obscure pioneers of what is probably a great educational movement.

Every man from his birth is brought into contact with his fellow-men and with Nature. Nature and Man should be, and are intended by the Creator to be, in harmony with each other. The great aim of education should be to teach the relations in which each man stands to Man and Nature—to teach each man in such a way that he should be best fitted to fulfil his social duties, best fitted to understand and employ advantageously the forces and powers of Nature.

Since the days of the Greek philosophers until quite recently all those who have taught have (some perhaps unconsciously) had in view the idea of teaching the pupils their duties as citizens by means of a classical education, a system of education which, including not merely the languages, but also history and human philosophy, was, indeed, a liberal education, although a one-sided one. This was the original aim, but, having to commence by teaching Latin and Greek before the great fathers of philosophy could be studied, their education degenerated into a mere teaching of two languages: a teaching, too, not carried on in a scientific or original manner, but by enforcing arbitrary rules of (so-called) grammar and by exercises in a forced and artificial style of composition—a system which (at any rate where education is confined to it) I contend is calculated to dwarf the mind and impair the reasoning faculty. For the young are naturally inquisitive and eager for knowledge. In our intercourse with our own little children we see that daily. Now, this teaching of grammar—irksome to the majority of teachers, irksome to the majority of learners, preventing freedom of thought or play of intellect—was all the education afforded in our chief schools some forty years ago. Here and there mathematics were added, but modern languages and science were entirely ignored.

Recurring again to the aim of education to teach the young their relations to Man and Nature, or rather so to train them that they may be able to learn them for themselves, we see a system of education dividing itself into two branches—Human and Natural Philosophy—the one taught by Literature and History, and the other by Mathematics and Physics and Science. Whether Latin and Greek are the best means for teaching the former of these is not my business now to discuss. But we must bear in mind that school education can be but rudimentary, but must be sound. Boys (and girls, too) should not be turned into superficial sciolists, but should have a good solid foundation given them on which to build their future knowledge. Certain rudiments should be taught them, knowing which, they should be able, branching one way or the other, as their faculties or inclinations lead them, to devote themselves to their own peculiar study.

And these rudiments should be—a Language, either ancient or modern, besides their own ; a certain amount of Mathematics, principally Arithmetic and elementary Geometry, or rather, perhaps, Geometrical Drawing—the Arithmetic to give quickness and readiness, the Geometrical Drawing to teach form and shape ; and Geography, Political and Physical—the former being absolutely necessary to the study of the History of Man, the latter—Physical Geography (Eadkunde, as the Germans and Professor Huxley call it, Natural History as Mr. Wilson names it)—being nothing less than the History of Nature, the term by which I, with all due deference, would prefer it to be designated.

With this groundwork a pupil should afterwards be able to devote his attention more particularly to his own special study. But these things should be taught *thoroughly*. It is impossible to expect a boy of average abilities to learn well many things—it is injurious to him, mentally and bodily, to attempt it. And yet it is attempted. For I cannot too prominently bring before you the fact that in very many schools where science is taught, it is added to other studies—it has been pushed in forcibly—and often in a most perfunctory manner. One term a boy has a course of Mechanics, the next of Astronomy, the next of Chemistry, and so on. I hold that this is a great evil; injurious to all concerned, pupils as well as teachers. I wish to maintain that a good, solid, common foundation—some such a one as I have sketched out—should be given to all ; and that then there should be two great divisions in a school—the one Literary, the other Scientific and Mathematical.

I hold, then, the first object of school education should be to ground the young thoroughly, not superficially, in those elementary studies which may best fit the pupils afterwards to pursue their investigations into the History of, and the laws which govern, Man and Nature. And I consider Geography in its broad sense, Political as well as Physical, to be one of these elementary studies, absolutely essential to the proper study of the History of Man and Nature. The upholders of the old system of education admitted this partly ; for they made a point of teaching political divisions of the world in the days of the supremacy of Greece and Rome, and they were glad if, in the nursery or under a governess, a boy had learnt the different countries of the world at the present time, and the names of their chief cities. But having myself for many years been a teacher of Modern History, I found boys absolutely ignorant of the commonest geographical facts, unable therefore to understand the political importance of treaties altering the boundaries of countries, or of the exchange of colonies—in fact, so badly grounded that they were unable to use with any advantage Historical Atlases, such as that of Spruner. Obviously a knowledge of Political Geography must precede the study of History.

But that Physical Geography should be the groundwork of science teaching is not so obvious to all teachers. I ought, perhaps, to have said before, that in all matters of practical teaching I advocate nothing that I have not myself personally tried. I spoke before of the inquisitiveness of children; every parent knows it well, and must have observed also how, after school-life begins, this inquisitiveness seems to vanish. My own opinion is that it is generally stifled by the evil genii "Latin and Greek Grammar." Be that as it may, I know that this disappearance of inquisitiveness does not prove that it is dead. "With warmth and gentle rains it sprouts afresh." This stimulating power is afforded by Physical Geography. The first things the teacher will teach are the first principles of Astronomy—the earth, its position in the solar system, the phenomena of day and night, summer and winter, eclipses and the changes of the moon. Boys generally become interested at once; the intellectual cravings of their very childhood again revive and are being satisfied. At the end of the very first lecture boys will remain behind, asking for further information—"Why is it?" Having, then, taught the first principles of Astronomy, the teacher will proceed to the first principles of Heat, to the effect of solar heat on the earth, tides, waves, and currents, evaporation and rain. Thence he will proceed to the first principles of Geology—to the changes in the physical features of the earth, to rivers and ice and volcanoes, to the formation of chalk and coral, to the distribution of plants and animals. And if at first the inquisitiveness of the learners is excited, at the end they first feel their intellectual powers. They see how, from the knowledge of certain facts, the great laws of Nature are deduced—the spirit of the inquirer, of the discoverer, is aroused in them—their reasoning faculties are now excited and strengthened.

Of course, generally speaking, boys who are the best in Classics and Mathematics are best also in Physical Geography, because they are boys whose natural abilities are above the average. But there are many exceptions. Boys, whose early training has been deficient, or who from some intellectual cause are unable to appreciate the refinements of grammar, suddenly awake, as it were, when first taught the principles causing the phenomena of Nature. And a great moral good is effected in them. I am one of those who hold that sports—Athletics—are of use as a means of moral as well as of bodily training, that many a thick-headed strong-limbed boy, by his excellence in sports is enabled to recover or maintain the self-respect he may have lost, or be in danger of losing; so, in like manner, the boy finds in the study of Nature, and in the fact that he may hold his own in this study, a means of preserving his self-esteem. An objection strikes me may be made against the study of Physical Geography, that it is too discursive. I have insisted on a boy's training being thorough, and at the same time have praised the study of Physical Geography as being introductory to so many sciences. But there is nothing really contradictory in this. The want of thoroughness is seen when boys are successively put through courses of Astronomy, Chemistry, Mechanics, &c. Anything like a thorough knowledge of these sciences, or of any one of them, cannot be imparted to a boy. Astronomy and Mechanics, for instance, if exhaustively studied, require a large knowledge of Mathematics—much larger than that possessed by the great majority of boys. But the first principles of those sciences necessary to the study of Nature, such as Astronomy, Heat, Geology, Zoology, may be thoroughly taught, and can be perfectly understood by a boy of fair intelligence. Again, discursiveness is not opposed to thoroughness, and the discursiveness of Physical Geography is a positive advantage to the teacher. One of the great benefits which a large school affords to boys is that they are brought into contact with so many different minds, they are subjected to the influences of so many different teachers. So the science teacher who is instructing his boys in Physical Geography will naturally dwell at greater length on his own *specialité*, will bring much peculiar knowledge to bear in illustrating all those natural phenomena which relate more particularly to his own branch of science. And on this I found another reason for making Geography or the History of Nature the foundation of all science-teaching in schools.

I will briefly mention the method I employ in teaching Physical Geography, premising that I by no means insist on it as the best method. I have had good results from it, but doubtless a better method would have produced still better results. At the same time, I must claim this indulgence for science teachers from adverse criticism. Classical teachers have the experience of centuries to guide them. The method of science teaching in schools must be regarded as tentative. As I before said, the teachers of the present day are but the pioneers of the educational army which will eventually, I believe, overcome the ignorance of "common things" displayed so universally, and put to flight the host of Philistines who rejoice that their children's intellects are kept in the same state of bondage as their own.

My class consists of about thirty boys. I give them no *text-book*, and on this, I may say, I place great importance. Each boy has one of Keith Johnston's School Atlases of Physical Geography, price 10s. 6d. The teacher, I presume to be conversant with Humboldt, Herschel, Tyndall, Murchison, and Reclus, and to know Sir C. Lyell's "Principles" thoroughly. My references are principally to these authors, and my "stock in trade" consists of wall maps, photographs, and a microscope in my study for the more eager pupils. I ought to have also a good geological museum. This is at present in course of formation, and, when the school authorities will grant a suitable room, will be speedily in working order. I require each boy to bring in a large note-book, with each page folded in the middle. I commence my lecture by stating first what is the more immediate subject of my lecture; then I dictate from my own notes an abstract of the first division of my lecture; this abstract each boy writes on one half of the folded page. I then enlarge and illustrate by facts, putting at the same time frequent questions to the boys. On the other half of the page each boy takes as many or as few notes as he pleases. At the end of the lecture, which lasts somewhat less than three-quarters of an hour, I refer the pupils to authors, and the chapters of their books which treat more at length of the subject. Only the more industrious boys refer to these. If possible, I show a photograph or picture of some well-known or often-described place, which may serve to illustrate the lecture. After my two lectures (two lectures are given weekly) I require each boy to bring an abstract of the lectures, not copied verbatim from his note-book. I give marks for these, and also additional marks for good diagrams. After every eight or ten lectures an examination-paper is set, and I give a prize to the boy whose aggregate marks for abstracts and papers are highest.

I feel that a most valuable addition to my lectures would be some kind of field instruction—such as I hope to hear mentioned by the President—which should include the teaching practically the use of instruments, and also should admit of those excursions—geological, botanical, or zoological—so common in German schools.

Now, I believe, that independently of the knowledge acquired by the boys, the mental training is by no means despicable, which shows them, first, how to analyse a lecture or a book, as the abstract dictated to them does; and secondly, teaches them, as their original abstract does, how to reproduce in their own language the lectures they hear. And this is part of the thoroughness of teaching which I insist on.

One other objection I have heard urged against Geography—that it is a subject easily "crammed up"—I may here answer. The result of competitive examinations is doubtless to encourage a system of cramming. If a pupil is not intended for a competitive examination, I hold that my method is the farthest possible removed from cramming; but if a pupil be intended for a competition, the question arises, Will he be able to pass well? I have faith that he would, and the only two competitive examinations pupils of mine have gone in for they have done satisfactorily. But I hold that Geography, if the examination papers are set with the same discrimination as those set in the Royal Geographical Society's examinations, cannot be crammed up. There are two great desiderata in an examination paper: first, to give problems; secondly to give full marks for certain portions of the paper answered well, *i.e.*, to encourage a thorough knowledge of some parts of a subject. Fortunately, then, Geography is so discursive; and fortunately, problems can be set—given certain conditions, what will result?—given certain facts, what laws would you deduce? But my own experience teaches me this—that Mathematics admits of more "cramming" than any other study; and yet who would refrain from examining in Mathematics, because they admit of being crammed? I trust the time is not far distant when every boy in those schools professing to lay the foundations of liberal education will be at least as conversant with Geography, both Political and Physical—the one the necessary introduction to the history of Man as the other is to the history of Nature—will, I say, be as conversant with Geography as they are now supposed to be with the Latin Grammar.

REPORTS OF MEETINGS, SESSION 1885-6.

SEVENTH MEETING,

In the Lecture Hall of the Manchester Athenæum, on Wednesday, October 14th, at 7-30 p.m., Chevalier FROEHLICH, Italian Vice-Consul for Manchester, in the chair.

The minutes of the meeting held June 12th were read and approved.

The following presentations to the Society were announced:—

2 vols. (about) *United Service Journal.*

3½ vols. (about) *Royal Geographical Society's Journal*, 1883-4-5.

By Lieutenant-Colonel E. Rogers.

The election of the following members at the previous meetings of the Council was declared:—

ORDINARY: Messrs. Max Robinow, Henry Cruse, Dr. John Christien, Herman Woolley, Robert Dobson, H. A. Rhode, Sam Armitage, Thomas Dentith, Elliott Adair, John W. Schofield, W. Sherratt, Rev. W. Marsden, J. B. Parkinson, Henry Solomonson, P. Moir Crane, Alfred Bickham, T. H. Rymer, E. G. Wrigley, J. J. Wilkinson, Robert Wilkinson, Ralph Bates, Joseph Donnell, J. C. Needham, J. L. Kennedy, H. E. Sowerbutts, J.P., Joseph J. Armitage, Alfred Leaf.

ASSOCIATE: Messrs. Alfred Dugdale, Ralph Peters, John Robertson, Charles W. Grindley.

LIFE MEMBER (by payment of £10 10s.): Mr. G. W. Rayner Wood, J.P.

HONORARY MEMBERS: The Right Hon. the Marquis of Lorne, K.T., President of the Royal Geographical Society; Major-General Sir Frederic J. Goldsmid, C.B. K.C.S.I., F.R.G.S.

Candidates were nominated for election at the next meeting of the Council.

Announcements were made in reference to the future meetings of the Society particularly relating to the work of the Educational Committee.

The address to the Society was given by Lieut.-Colonel E. Rogers, F.R.G.S., "British Honduras, its Resources and Development," and was illustrated by a large sketch-map prepared by the Society. (This paper appeared in the last issue of the Journal, p. 197.)

Several questions were asked and replied to, and—

Colonel Sir **Robert Harley**, C.B., formerly governor of Honduras, then addressed the Society. He said: We have had, I am sure, a very graphic and interesting paper from my old friend Colonel Rogers. It will lead those persons who desire to embark in a good enterprise, and profitably invest their money, to look in the direction of this fruitful land, British Honduras. I can endorse, truthfully, what has been said as to the rich resources while I was governor of this colony, and to show that I am not alone in that opinion, I will read to you what was said by the Chamber of Commerce of New Orleans, when they received me on my journey home. They said in an address to me: "The Chamber of Commerce of New Orleans desire to welcome you to our city. Our chamber was the first commercial body in this country to call attention, years ago, to the rich and fertile lands lying southward of us, fringing the Gulph of Mexico and the Caribbean Sea—countries that invite our friendship and our commerce. The first of these lands of the tropics to accept this commercial invitation was that over which you have the honour to preside as chief magistrate and Governor—British Honduras. While that colony is small in point of numbers, it is greater and more important, as far as New Orleans is concerned, than many a mighty empire. We have a line of iron steamships, none better in the world, running to the German ports, but our little neighbour, British Honduras, seated midway between the two Americas, is more important to us than Germany, and actually exports more to this city than that empire which counts *its* millions of people for every thousand within the limits of Honduras. Our imports from Belize exceed those from all Central America, are larger than those that busy European workshop, Belgium, ships us, and fall only a few thousand dollars behind your big neighbour Mexico. On our part, we send more to Belize than to the entire South American continent, more than to Scotland or Canada, more than we ship to the ever-faithful isle of Cuba, lying as it does at our very doors, and crying aloud for the flour, wheat, and provisions of the United States. Small, therefore, as British Honduras is, it is, in the eyes of New Orleans, a great and prosperous country, an inviting field for our commerce. We know that ever since you have presided over the destinies of British Honduras the growth and development of that colony, thus began, has been steady and continued, and that a railroad is now projected into the interior which will enable it to ship us the mahogany, rubber, cedar, ebony, and dye-woods, now beyond the reach of man. You have shown how fully you appreciate the reciprocal intercourse between Belize and New Orleans, for when there was a contract to let for the carriage of mails along the coast of that colony, you advertised for bids in our city papers. In fine, you have carried out a policy that makes New Orleans deeply interested in the growth and development of your colony—a policy which has so improved British Honduras, that Governor Bailee's description of it, eight months ago, flattering as it was, falls far short of the truth to day."

The Hon. Mr. **Phillips**, Member of the Council of British Honduras, said: Mr. Chairman, Ladies, and Gentlemen,—I should be very ungrateful, indeed, if I did not record my appreciation of the service that my friend, Colonel Rogers, has rendered to the colony I represent, and on whose account, as well as on my own, I have to tender him my best thanks for the very able and interesting paper he has favoured us with this evening. The Colony of British Honduras was much decried formerly by persons who knew nothing about it, on account of the supposed unhealthiness of its climate;

and of late years, through the unfortunate association of name with that of a neighbouring Republic, whose financial operations in relation to railroad schemes are still somewhat unsavoury. Now, let it be understood that we have nothing in common with Spanish Honduras. Ours is a British colony, which has been in the possession of the English for more than 200 years, but, having been jammed away in a remote corner of the world, has had very few chances of making itself known, and it has consequently remained unnoticed until very recently. The lecturer has given so exhaustive a dissertation on the colony that there remains but little for me to add, and the affirmative utterances of our late Governor, Sir Robert Harley (whose presence here to-night we are singularly fortunate in having secured), have robbed me of much that I might have commented on. That British Honduras has a great future before it cannot be doubted. The trading corporation recently formed propose to help in furnishing the one, and the Colonial Government, I am glad to know, are maturing schemes for supplying the latter want. When these two things have been happily accomplished, there will be a certainty of the colony advancing into a position of marked financial progress. The cultivation of its rich soil has been only recently undertaken by the colonists, and the experiment has been productive of golden results. Some of the fruit plantations, when I left the colony, now more than a year ago, were paying large dividends, one as much as 50 per cent on the capital invested. The demand for our fruit to supply the United States of America is practically unlimited, and a ready cash market for our production is always near at hand. Our woods are also beginning to find favour in the States, and a better market will probably before long be found there than in the old country. The cultivation of fibrous plants will form an important item in the scheme of development, in addition to other objects. I think it would be nearly impossible to over-rate the natural and other resources of British Honduras. However, all that has been said in favour of the colony by Colonel Rogers I am in a position to confirm and verify. British Honduras teems with untold resources, which have been lying undeveloped for generations. Those who have gone before us have only barely tapped those sources of wealth and have left much behind. These undeveloped treasures are awaiting the advent of the capitalist and the immigrant, and the land from which such bountiful results are to be obtained lies before them, offering a goodly inheritance to those who have the confidence and the courage to go and possess it.

Mr. MARK STIRRUP, F.G.S., said: As a member of the Council of this Society I have much pleasure in rising to move a vote of thanks to Major Rogers for his interesting and valuable address. The British colonies are practically unknown to nine-tenths of Englishmen. If you asked where British Honduras is very few people would be able to answer the question satisfactorily, and tell you in what part of the globe it is located. The value of our colonies has only recently been brought before the notice of the public. It is only the energy displayed by foreign nations in this respect that has aroused the attention of the British people, and made them desirous of knowing something of our own colonies and the value they may be to us. I am extremely pleased with the information given to us this evening about this small colony. Something has been said about the unhealthy condition of the country, but Colonel Rogers and Mr. Phillips are fair specimens of what living there is like.

The Rev. L. C. CASARTELLI seconded the vote of thanks.

Major ROGERS, in reply to further questions, said: There is a monthly service of schooners between Liverpool in this country and Belize. Also a weekly service to Greytown. The population of the colony is about 28,000, and that of the capital, Belize, 7,000.

The motion was carried unanimously.

A vote of thanks was passed to Chevalier Froehlich for presiding over the meeting on the motion of Sir **Robert Harley**, seconded by Mr. **Thomas Dickins**, J.P.

Chevalier **Froehlich**, in reply, said: I think that it is most important that we in Manchester, which is about to be connected by a waterway with the sea, should know something of the outlying British colonies. British energy would be better bestowed upon her own colonies than upon other lands from which great things are promised—from such places as Africa and the Congo, and other mysterious places. I would counsel all British subjects to bestow all their capital and attention to their own colonies, because, after all, they are of the most importance to them.

The meeting then closed.

EIGHTH MEETING,

In the Lecture Hall of the Manchester Athenæum, on Wednesday, November 11th, 1885, at 7-30 p.m.; the **Vice-Chancellor** of the Victoria University (Dr. Greenwood) in the chair.

A large number of drawings and models adorned the hall, by permission of the Council of the Architectural Association.

The **Secretary** made announcements in reference to the work of the Society.

The address to the Society was given by the Rev. S. A. Steinthal, on "The Great North West—The Pacific Slope." The address was illustrated by a sketch map prepared by the Society. (See p. 241.)

A number of questions having been asked, and Mr. Steinthal having replied—

It was moved by the Rev. L. C. **Casartelli**, M.A., that a very hearty vote of thanks be given to the Rev. S. A. Steinthal for his admirable and valuable paper, and to the Council of the Architectural Association for the loan of their exhibits.

Mr. **Henry Wood** seconded the motion, which was carried.

The reader of the address having acknowledged the vote, Mr. H. M. **Steinthal** moved, and Mr. S. **Ogden**, J.P., seconded, a motion, that the best thanks of the Society be given to the Vice-Chancellor for his kindness in taking the chair, and for his valuable services to the Society. Carried unanimously.

The **Vice-Chancellor** replied.

NINTH MEETING,

In the Society's Library, 44, Brown Street, Wednesday, December 16th, 1885, at 7-30 p.m.; Mr. **Mark Stirrup**, F.G.S., in the chair.

The Rev. L. C. **Casartelli**, M.A., Ph.D., gave the address to the Society on "New Europe—Roumania, Servia, Bulgaria." (See p. 269).

Professor T. H. Core, M.A., the Rev. S. A. Steinthal, Dr. Samelson, M. Le Roux, Vice-Consul for France, and others took part in the discussion of the paper.

The Rev. S. A. **Steinthal** moved, and Dr. **Samelson** seconded, a motion which was carried unanimously: "That our hearty thanks be given to Dr. Casartelli for his very interesting and excellent address."

The Rev. L. C. **Casartelli**, having replied, proposed a hearty vote to the Chairman for his conduct in the chair.

Mr. **Jarrett** having seconded the motion it was carried, and the **Chairman** having acknowledged the vote, the first meeting of this kind, which was most interesting, was brought to a close. Some conversation took place after the meeting.

ADDITIONS TO THE LIBRARY.

OCTOBER TO DECEMBER, 1885.

PURCHASED BY THE SOCIETY.

London—Proceedings of the Royal Geographical Society, London. Vol. 1, 1857, to vol. 22, 1878 (except No. 5, vol. 16).

New Series, illustrated with maps, charts, and plans. Vol. 1, 1879, to vol. 6, 1884, complete.

PRESENTED.

Afghanistan—the Northern Boundary of India and the District to the Caspian Sea. One thousand copies. By Mr. Joseph Cowen, M.P.

The British Empire. One thousand copies. By Mr. Joseph Cowen, M.P.

Afrika auf der Ebstorfer Weltkarte, 1885. Presented by Professor A. W. Ward, Litt. D.

We have received this interesting contribution to the history of mediæval geography by Dr. E. Sommerbrodt, published at Hanover,* on the occasion of the recent fifty years' jubilee of the Historical Society for Lower Saxony. One of the greatest treasures of that society is the colossal circular map of the world, which formerly belonged to the Monastery of Ebstorf, and which is undoubtedly one of the most noteworthy geographical monuments of the later middle ages. In his treatise, entitled "Afrika auf der Ebstorfer Weltkarte, Dr. Sommerbrodt closely examines the relations between the African portion of this map and that of its predecessors, and more especially discusses the question as to the derivation of its text from ancient sources, themselves, perhaps, in their turn traceable to the famous *Orbis pictus* of Agrippa. A sketch of the African section of the circle accompanies the treatise, which we hope may herald the reproduction, in an acceptable form, of the entire map.

Boston, U.S.A.—Twelfth Annual Report of the Bureau of Statistics of Labour of the Commonwealth of Massachusetts, January, 1881.

Presented by Chevalier R. Froehlich.

British Honduras—The Trading Corporation of British Central America. By H. S. Resources of the Colony. London, 1885.

Two copies. Presented by Lieut.-Col. E. Rogers.

Genevé—Notice sur Arnold Guyot, 1807-1884. By Charles Faure. An interesting short memoir of the life of M. Guyot, the celebrated Geographical scholar.

Manitoba—Guide to the Qu'appelle Valley, Assiniboia, Canada, &c., &c. By R. Sykes. Map and Illustrations. T. Hunter and Co. Limited.

Presented by Mr. R. Sykes, Edgeley, Stockport.

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* Klindwerth's Hofbuchdruckerie.

New York—American Express Company's Pocket Atlas. A most interesting and useful little brochure.

United States Customs Duties.
Equivalent Time in Various Cities.
Chart of the North Atlantic.
Maps of—The World
Ireland.
England.
Scotland.
Holland and Belgium.
France.
North and South Germany.
Switzerland.
Italy.
Spain and Portugal.

Presented by Mr. W. Wild, Boston, U.S.A.

Rome—Bolletino Consolare del Minestro per Gli Affari Esteri di S. M. Il Re D'Italia

Vol. 17—No. 4, 1881.
Vol. 18—No. 9, 1882.
Vol. 19—No. 1, 1883.
Vol. 19—No. 6, 1883.
Vol. 19—Nos. 7 and 8, 1883.
Vol. 19—No. 9, 1883.
Vol. 19—No. 12, 1883.
Vol. 20—No. 1, 1884.
Vol. 20—No. 2, 1884.
Vol. 20—No. 6, 1884.
Vol. 20—No. 8, 1884.
Vol. 21—No. 1, 1885.
Vol. 21—No. 3, 1885.[*]
Vol. 21—No. 5, 1885.
Vol. 21—No. 9, 1885.
Vol. 21—No. 11, 1885.

Presented by Chevalier R. Froehlich, Vice Consul for Italy.

Washington—Commercial Relations of the United States. Reports from the Consuls of the United States on the Commercial Manufactures, &c., of their Consular Districts.

1881—Nos. 9, 10, 12,[†] 13.
1882—Nos. 18, 20, 21, 22, 24, 25, 26.
1883—Nos. 27, 28, 31.
1884—Nos. 38, 39, 40, 44, 46, 47.
1885—Nos. 49, 57.

Presented by the Italian Vice-Consul, Chevalier Robert Froehlich.

London—Proceedings of the Royal Geographical Society.

Vol. 4, Nos. 2, 3, 4, 7, 8, 9, 10, 11, 12.
Vol. 5, Nos. 1, 2, 3, 5, 6, 7, 8, 9, 10, 11, 12.
Vol. 6, Nos. 1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 12.
Vol. 7. Nos. 2, 4, 6, 7 9, 10.

Presented by Lieut.-Col. E. Rogers, F.R.G.S.

——— Journal of the Royal United Service Institute.

Vol. 19, No. 84 and Appendix.
Vol. 20, No. 85.
Vol. 21, Nos. 90, 91, 92, 93.
Vol. 22, Nos. 94, 95, 96, 97.
Vol. 27, Nos. 119, 120, 122.
Vol. 28, Nos. 123, 124, 125, 126.
Vol. 29, Nos. 128, 129.

Full of very interesting geographical matter, and illustrated with maps and plans.

Presented by Lieut.-Col. E. Rogers, F.R.G.S.

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[*] Contains an account of the proposed Manchester Ship Canal and Map. [†] This is a very valuable bird's-eye view of the Cotton Trade of the world.

London—A Physical, Political, Historical, and Descriptive Geography. By Keith Johnston, F.R.G.S. With maps and illustrations. 3rd edit. Revised by E. G. Ravenstein, F.R.G.S. London, Edward Stanford, 55, Charing Cross, S.W., 1885. Price 12s. 6d. Presented by the publisher, Mr. E. Stanford.

This is a third edition, revised, of the late Mr. Keith Johnston's textbook of geography, and is one of the best we have. The historical portion is exceedingly interesting, and the book should form a portion of the library of all teachers, and should be in the hands of the scholars of the upper forms. It contains a good index.

EXCHANGES WITH CORRESPONDING SOCIETIES.

London—Proceedings of the Royal Geographical Society. Vol. 7, No. 11 (November), No. 12 (December), 1885.

(11) The Rivers of the Punjab. By General R. Maclagan, R.E. With map.
(11) Notes on the Physiography of Southern India. By Colonel R. R. Branfill.
(11) The Geographical Position of Mashad (Meshed). By Major T. H. Holditch, R.E.
(11) Projected Restoration of the Reian Mœris, and the Province, Lake, and Canals ascribed to the Patriarch Joseph. By Cope Whitehouse, M.A. With maps and section.
(12) Presidential Address on the Opening of the Session 1885-6.
(12) An Exploration of the Goajira Peninsula, U.S. of Colombia. By F. A. A. Semains. With map.
(12) Report on Admiralty Surveys for the year 1884. By Capt. W. J. L. Wharton, R.N., Hydrographer.
(12) Letters from Colonel Prejevalsky.
(12) Proceedings and Index to Volume 7.

Edinburgh—The Scottish Geographical Magazine. Vol. 1, No. 11 (November), No. 12 (December), 1885.

(11) North-West Australia. By J. G. Bartholomew, Hon. Sec. S.G.S. With physical map of North-West Australia.
(11) The Basin of the Beauly. By T. D. Wallace, F.S.G.S.
(11) Roraima. By E. F. im Thurn.
(11) Geography and Trade in the East. By John Geddie, F.R.G.S.
(12) Anniversary Address by Lieut. A. W. Greeley, U.S. Army.
(12) Askja, the Great Volcanic Crater of Iceland By James Wright. With sketch-map.
(12) Thoroddsen on the Lava Desert in the Interior of Iceland. By J. W. McCrindle, M.A.
(12) The Caroline Islands. By Thomas Muir, LL.D., F.R.S.E.
(12) Lieutenant A. W. Greeley, U.S. Army, with portrait, and map showing the geographical discoveries of Greeley's expedition. North Polar chart, showing international polar stations, 1882-3.

London—Journal of the East India Association. Vol. 16, Nos. 1-6.

(1) Indian Railway Policy. Gold and Silver Duties.
(1) Memorial to the Chancellor of the Exchequer and Reply thereto.

(1) Memorial to the Secretary of State for India on Railways and other Public Works and
(2) Reply thereto.
(2) The English Duties on Gold and Silver Plate: their Special Injustice as affecting Indian Silver Craftsmen.
(3) Indian Pauperism, Free Trade, and Railways.
(4) The North-West Frontier of India.
(5) Self-Government in India.
(6) European Pauperism in India.
(6) The Preservation of Wild Birds in India.

London—Journal of the East India Association. Vol. 17, Nos. 1-5.
(1) The Mutual Advantages of the Connection between England and her Indian Empire.
(2) The Indian Civil Service.
(3) Competition for Indian Civil Service.
(4) The Costliness of Indian Administration.
(4) Obituary Notices of the Right Hon. Sir Lawrence Peel and Colonel A. B. Rathbone.
(5) Taxation of Cultivators' Improvements.
(5) Petition to the House of Commons Regarding the Exemption of Personal Property in India from Probate Duties.

Argentine Republic—Commercial Statistics of the Argentine Republic. By F. Latzina, Director of Statistics. Nos. 36, 37, 38, 39, 1885.

Antwerp—Bulletin de la Société Royale de Géographie d'Anvers. Tome 10, 3e Fasicule.
Proceedings of the Society.
The Latest Discoveries in Africa.
Travels of Korito, Capello, and Ivens.
Descent of the Kassai.
The Wellé Problem.
M. le Dr. Louis Delgarno, Vice-President of the Society.
The Contested Territory between France and Brazil.
The Coudreau Mission.
M. A. Baguet, Vice-Consul at Brazil.
Universal Exhibition at Antwerp. The Congo Exhibition Organised by the Royal Geographical Society of Antwerp: Report of the Committee of Organisation.
Voyages and Travels in the Somali Country. By F. L. James.

Berlin—Verhandlungen der Gesellschaft für Erdkunde zu Berlin. Band 12, No. 7, July, 1885; No. 8, October, 1885; No. 9, November, 1885; No. 10, December, 1885.
(7) Memoir of Dr. Gustav Nachtigal.
(7) Dr. Albrecht Penck on the Mountain Ranges of Central Germany. With Geological Diagrams.
(7) Dr. Aurel Schulz, of Port Natal, on the Exploration of the Chobe and Cubango Rivers.
(8) Geographical and Geological Sketch of Western North America. By S. vom Rath.
(8) The Cameroons. By Dr. M. Buchner.
(9) The Kalahari. By Herr Farini.
(9) Batanga Land. By Hugo Zöller.

(10) The Schingú Expedition. By Dr. O. Clauss.
(7, 8, 9, and 10) Geographical Notes, Reviews, Correspondence, Proceedings of the Society.
(10) Index for the year.

Berlin—Deutsche Kolonialzeitung, Organ des Deutschen Kolonialvereins in Berlin.

20 Heft, October 15, 2 Jahrgang, 1885.
21 Heft, November 1, 2 Jahrgang, 1885.
22 Heft, November 15, 2 Jahrgang, 1885.
23 Heft, December 1, 2 Jahrgang, 1885.
24 Heft, December 15, 2 Jahrgang, 1885.

(20 to 24) The German Colonial Association.
(20) The Climatic Conditions of the West Coast of Africa.
(20, 24) Cruises of the German Navy in 1884.
  (20) III. Australia, the South Sea, and the Red Sea.
  (22) IV. The West Indies, Venezuela, Yucatan, and Florida.
  (23) V. Canada, South America, and Central America.
  (24) VI. Nicaragua, Panama, Mexico, and Africa.
(20) Reminiscences of Samoa. (2) Political and Climatic Conditions.
(21) Reminiscences of Samoa. (3) Irrigation and Harbours.
(20) Cultivation in the South Brazilian Colonies.
(20) The Fiji Islands in 1884.
(21, 22, 24) General Colonial News.
(21) German Acquisitions in East Africa.
(21) Dr. Max Buchner on Cameroon-English.
(21) The Introduction of Dromedaries into South Africa.
(21) Paraguay.
(22) King William's Land and Bismarck Archipelago.
(22) The Congo.
(22) Missions, Civilisation, and Colonisation.
(23) The Utopia of the Congo, and its Exaggerated Proclamation.
(23) The Colony of Mundo Novo.
(23) The German Export of Cattle from La Plata.
(24) German Emigration and its Limit. By Dr. Hermann von Jhering.
(20 to 24) Reviews and Correspondence.
(24) Index and Title Page.

——— Abdruck aus dem Geographische Jahrbuch X., 1885. Herr Wichman.
A List of Geographical Societies throughout the World, abstracted from the Geographical Year Book, 1885.

Bordeaux—Bulletin de la Société de Géographie Commerciale du Bordeaux. Nos. 20, 21, 22, 23, 24, 1885.

(20) New Attempts of Germany to Develope her Export Trade.
(20, 21) Travels of Capello and Ivens, 1884, 1885.
(21) The Commerce of Couze and Saint-Frank.
(21) The Chalk Hills of Great Britain.
(21) Necessity of Lighting Cape Guardafui.
(22) Centenary of the Publishing Firm (Geographical) of Justis Perthes of Gotha.
(22) Commerce of the Port of Bordeaux for nine preceding months of 1885.

(23) Notes upon the Organisation of the Commercial Geographical Society and the Bank of Exportation of Berlin.
(23) Passage of the Rapids of the Mékong.
(23) M. de Brazza at Bordeaux.
(23) Captain Pietri.
(24) Lieutenant Wissman's Exploration of the River Kassai, 1882-4.
(24) Conference on the Territory in Dispute between France and Brazil, in the Valley of the Amazons.
(20, 21, 22, 23, 24) Geographical Notes.
(20, 21, 22, 23, 24) Astronomical Notes.
(23, 24) Proceedings of the Society.

Boston, U.S.A.—Harvard University Bulletin, No. 32, or vol. 4, No. 3, October, 1885.

The Kohl Collection of Maps, continued.
Index to Maps in the Royal Geographical Society's Publications, continued.
The Dante Collections of the Harvard College and Boston Public Libraries, Part 2. &c., &c.
Edited by Justin Winsor, and presented by him to this Society.

Bourg (L'Ain)—Bulletin de la Société de Géographie de L'Ain, No. 4. July-August ; No. 5, September-October ; No. 6, November-December, 1885.

(4) Geography of the Department of Ain. (A paper on local geography.)
(4) Travels in Tierra del Fuego. By Mr. T. Bridge.
(5, 6) The Cantons of Bourg and Bagé.
(5, 6) Canada. By Professor W. Boyd-Dawkins ; translated by M. S. Loiseau.

—— Société Géographie de L'Ain. Géographie de L'Ain. Vol. 1, 1885.

1. Physical Aspect of the Department.
2. Hydrography.
3. Natural History.

Historical Geography of the Department.

1. History.
2. Biography.
3. Historical Monuments.
4. Riches of Art of the Department.
5. Popular Songs.
6. The Dialect.
7. Mythology.

Brest—Société Académique de Brest. Bulletin de la Section de Géographie.

The Society Islands (Archipelago): Geology, Orography, Meteorology, History, &c., &c.
The Panama Canal.
The European Powers on the West Coast of Africa.
Origin and Progress of the Power of the Hovas in Madagascar.
Bibliography of Madagascar.

Brussels—Société Royale Belge de Géographie—Bulletin No. 5, 1885, Sept. and Oct.

The United States of Mexico. By G. Leclercq.
A Study of Local Geography and History—Quiévrain. By T. Bernier.
The Congo Free State. By Commander Cameron.
Commercial Geography.

Geographical Chronicle—
- Europe.
- Asia.
- Africa.
- America.
- Oceania.

Hygienic Statistics. By Dr. Janssens.

Brussels—Société Royale Belge de Géographie—Bulletin No. 6, 1885, November and December.

The Congo and the Bangola Tribes. By Lieut. Coquilhat.
Exploration of the Kassai, and Map. By Lieut. Wissman.
Three Months in Texas. By A. Lancaster.
Capello and Ivens's Travels in Africa.
Commercial Geography, Geographical Chronicles, Proceedings, &c., &c.

——— Le Mouvement Geographie. Nos. 22, 23, 24, 25, 26, 27, 28. 1885.

(22) The German Protectorate at Zanzibar.
(22) Portugal and Negro Slavery.
(22) The International Geological Congress at Berlin.
(22, 23, 26, 27) The Congo Free State. News. With view of river and the Station of Isanghila.
(27) Travels in India (Ceylon to Lahore).
(23) The Geographical Map of Belgium and M. Geikie.
(23) Discovery of the Ancient Bed of the Amu Daria.
(23) Lieut. Coquilhat at Home at Bangala (on the Congo). With numerous illustrations and sketch-map of river.
(23) The Progress of Melbourne.
(24) The Arabs at Stanley Falls.
(24) M. Louis Amelot.
(24) The Crocodiles of the Congo.
(24) Palm Oil.
(24) The Brussels Palæontological Museum.
(25) Supplement, containing extracts and numerous illustrations from Mr. Stanley's new book, "Five Years on the Congo."
(27) Press Notices of the Work.
(26) The Death Rate of the Congo.
(28) Ditto, 1st, Missionaries. 2nd, Merchants.
(26) Capello and Ivens in Central Africa.
(26) The Russians in Asia.
(26) The Dismemberment of Turkey.
(26) The St. Gothard Tunnel.
(26) Tobacco.
(27) A Day at Oxford. With five illustrations.
(27) The Yellowstone Park, U.S.A.
(27) Return of M. Prejevalsky.
(28) The Congo Railway.
(28) The Explorations of the Rev. Mr. Grenfell and M. Von François on the Lulongo, &c. With map.
(28) The Hypothesis of the Oubanji-Ouelle adopted by Mr. Grenfell.
(28) Kiepert's New Map of Africa. Price, about 20s. (This is a large and very beautiful map. A copy can be seen in the library.)

Constantine (Algeria)—Société de Géographie. Third year, 1885. 1 and 2 Quarterly Bulletin.

Geographical Section.

Excursion of the Constantine Alpine Club to Tunis and Carthage. By B. D'Alméras.

Biskra, Temperature, Rainfall, &c., of, &c., &c. By M. Colombo.

Bibliographical Section.

Algerian Cartography. By M. Ch. Vars.

Petroleum. By M. F. Hue.

Afghanistan. By M. Ch. Simon.

Commercial Section. Tonquin.

Sahara Routes of Commerce, &c., &c.

Congo—Association Internationale de Congo. Mémoire sur les Observations Météorologiques faites à Vivi (Congo Inferieur), et sur la Climatologie de la Côte Sud-ouest d'Afrique en Général par A. Von Danckelman, Phil.D. Berlin: A. Asher et Cie, 1884. Presented by Mr. Mark Stirrup, F.G.S.

Douai—Union Géographique du Nord de la France Siège a Douai. Bulletin, sixth year. No. 5, May, 1885; No. 6, June, 1885; No. 7, July, 1885; No. 8, October, 1885; No. 9, November, 1885; No. 10, December, 1885.

(5, 6) Morocco. By M. H. C. des Fosses. With map.
(5) The French in Canada or Canadian French. By M. N. Fabre.
(5) Report of the Union.
(6, 7) The Republic of La Plata, the Development of its Industries, and of French Commerce with the Republic. (A valuable commercial paper). By M. A. Potel, C.E.
(6) M. Victor Geraud's Travels to the African Lakes.
(7) The Roadstead of Dunkirk. By M. Jules de Guerne.
(8) Afghanistan. By M. H. Corns.
(8) Russian Lapland; M. Rabot's Travels. By M. J. de Guerne.
(9) Saint Quentin. By M. R. Foute.
(9) French Possessions on the Senegal. By M. Tellier.
(9) Notes on Tonquin. By M. A. Bigorgue.
(10) The Caroline Islands. By M. H. Corns.
(5, 6, 7) Proceedings.
(5, 8) Geographical Chronicle.
(8, 9, 10) Geographical Chronicle of the Union.
(7) List of Members.

Dresden—XXI. Jahresbericht des Vereins für Erdkunde zu Dresden, 1885.

Respecting Jade and similar Material from Alaska. By A. B. Meyer.

From Calcutta to Alexandria. By Hermann Krone.

From Melbourne to Auckland. By Hermann Krone.

Reviews.

Proceedings and Accounts for 1883-4.

List of Members, &c.

List of 156 Corresponding Societies.

Florence—Bulletino della Sezione Fiorentina della Società Africana D'Ita Anno 1, Vol. 1, Fas 5, November 15, 1885. Anno 1, Vol. 1, Fas 6, December 15, 1885.

(5) The Colonial Problem. By B. Malfatti.
(5) Danakil-Assua. By P. Valle.
(5) The Civilisation of the Negroes of Intertropical Africa. By E. R.
(5) The Commerce of Western Africa. By P. S.
(5) An African Telegraph. By A. M.
(5) New Proposals for the Colonisation of the Congo. By E. R.
(5) Sudan and Abyssinia. By C. Guiliani.
(5) Recent Explorations in Tripoli. By P. S.
(6) Europeans in Tropical Climates. By B. Malfatti.
(6) The Littoral from Assaub to Massuah. The Italian Protectorate.
(6) Colonisation in Algeria. By E. R.

Frankfurt on Main—Jahres-Bericht des Frankfurter Vereins für Geographie un Statistik, 1885.

The Inhabitants of the Japanese Empire. By Professor Dr. D. Brauns.
Memorials of Eduard Rüppell. By Dr. Wilh. Stricker.
Proceedings and Accounts. 1883-5.
List of Members.

Greifswald—I. Jahresbericht der Geographischen Gesellschaft zu Greifswald, 1882-3. By Professor Dr. Rudolf Credner.

The Opening up of Central Africa. By Dr. Hübbe-Schleidan.
The Upper Hungarian Mountain Lands. By Dr. F. W. Paul Lehmann.
Our Scientific Knowledge of Corea, with a Bibliography. By F. G. Müller-Beeck, F.R.G.S.
Concerning the Physiographical Instruction of the Gymnasium. By Dr. Steinhausen.
Contributions towards the Geographical Knowledge of Pomerania and Rügen.
Letters on the Cordilleras.
Proceedings of the Society and List of Members.

Genevé—L'Afrique Explorée et Civilisée. H. George, editor, 1885. Nos. 1-12.

(1, 3, 4) The African Conference of Berlin. Acts of the Conference.
Exploration of the Basin of the Higher Orange River and its Affluents. By M. E. Jacottet.
(2, 3) Mr. J. Thomson's Expedition to the Masai Country. With map.
(4) Cartography of the Congo. With map.
(5) The Auriferous Reefs of the Transvaal.
(6) Exploration of the Limpopo. By Captain Chaddock.
(7) The Employment of European Workmen in Equatorial Africa. By Dr. Fischer.
(8) The Ivory Commerce of Africa.
(8, 11) Letter from M. Jean Mairet, Zanzibar.
(9) Exploration of the Affluents of the Congo. By the Rev. Mr. Grenfell.
(10) The Coast between the Prah and the Volta (West Coast of Africa) With map.
(10) Letters from Loanda (M. Héli Chatelain) and the Lower Congo.
(11) Exploration of the Kassai. By Lieut. Wissman.

(11) The Oil Commerce of Africa.
(12) The Last Travels of M. de. S. de Brazza.
(12) The French Possessions in Africa. By M. Ch. le Brun-Renaud.
(12) The Present Position of Colonies and Commerce in Africa. With a commercial map to date.

Halle—Mittheilungen des Verein für Erdkunde zu Halle A/S 1885.

Contribution towards the Knowledge of the Ancient Settlement of Central Thüringia. By Dr. G. Reischel.
Proceedings 1884-5, and list of members.
The Elbe at Magdeburg. By J. Maenss. With three tables and a map.
An Excursion from Tokio to the Japanese Interior in the Summer of 1880, with a diagram, and Supplementary Observations upon Japanese Mammals. By Prof. Dr. D. Brauns.
Carl Ritter's Sketch of the Lophiskos on Nea Kaimenies, Santorin. By K. von Fritsch. With two facsimile drawings.
A Monthly Observation of the Summit of the Merapi Volcano in Java. By A. von Brandis.

Hanover—Sechster Jahresbericht der Geographischen Gesellschaft zu Hanover. 1884-5.

Geographical Sketch of the Highlands of the Bolivian Republic. By Hugo Reck. (1) The Coast Mountains. (2) The Andes or Western Cordilleras. (3) The Eastern Cordilleras. (4) Inland Mountains between the two latter. With meteorological tables.
Report, Balance Sheet and List of Members, 1884-5, and List of Societies exchanging periodicals.

Havre—Société de Géographie Commerciale du Havre. Bulletin No. 4 (July and August), No. 5 (September and October), No. 6 (November and December), 1885.

(4, 5) Travels Round the World. By M. E. Michel.
(4, 5) Travels in Cashmere. By Captain S. L. Chibourg.
(5) Justin Perthes, Gotha.
(5) The Descent of the Kassai. By Lieutenant Wissman.
(5) Travels of MM. Capello and Ivens in Africa.
(5) Commercial Cartography.
(16) United States of Columbia. By M. G. Daux.
(16) The Port of Hamburg and her Commerce, particularly with France. By M. Gintton.
(16) Travels in the Region of the Camaroons.
(16) Map of the Basin of the Kassai, 1/10,000,000. By M. A. J. Wauters.
(16) The National Congress of the French Geographical Society: a Syllabus of the questions to be discussed: (1) Cartography. (2) Colonisation. (3) Commercial Geography. (4) Local Geography.

Irkutsk—Izvyestiy Vostochne-Sibirskova Otdyela Imperatorskova Russkova Geographichestova Obshchestva. Tom. xv. Nos. 5, 6 (1884 Goda). Irkutsk, 1885.

Dubrov: Journeys in Mongolia in 1883, chapters x.-xiii.
Gorskhov: Yuryung Uolan. A Yakutsk Tale. Part I.

This Siberian Society seems to make a speciality of collecting folk-lore and ethnological material, the value of which is really very great. The example is well worth following.

Lille—Bulletin de la Société de Géographie de Lille. Nos. 9, 10, 11, and 12, 1885.

(9, 10) Japan (conclusion). By S. Oukarva.
(9, 10) The Russians and English in Central Asia. By M. G. Guilott. With maps.
(8, 10) The Caroline Islands. By M. Alf. Renoud.
(9, 10, 11) Proceedings, &c.
(9, 10) Excursion of the Members of the Society.
(9, 10) To the Kariwal Hills and Ypres.
(9, 10, 11) Ditto to Katsberg, Posseringhi, and Ypres.
(11) Ditto to Bousecours.
(11) The Two Bulgarias. By M. A. Renouard. With map.
(11) Capello and Ivens's Travels from the Atlantic to the Indian Ocean. By M. A. Eeckman.
(12) Excursions in 1885.
To Dunkirk.
To Quenart.
To Staple, Steenvoorde, and Cassel.
(12) Travels of Capello and Ivens.
(12) Review of M. E, Guilet's book on the French Possessions on the West Coast of Africa.
(12) Index to the Volume.

Lisbon—Boletina da Sociedade de Geographia de Lisbon. 5th Series, Nos. 1, 2, 3, 4, 5, 6.

(1, 3) Silva Porta's New Journey in Africa.
(1) Portuguese Missions at San Salvador, Congo.
(1) Timor.
(2 6) "Oppida restituta Mauritania." By A. C. Borges de Figueridi. With illustrations.
(2) Benguella. By J. A. dos N. Ferreira.
(3) Exploration of Incomati.
(3) Portuguese Guinea.
(3) The Congo and P. G. By C. de Magalhaes.
4) Dialects of the Interior from Mossamedes. By A. F. Nogueria.
(5) Description of Railway from Lorenzo M. to Pretoria. By J. Machado.
(6) Exploration of Africa. By L. de Assumpeso.
6) From Fogo to Cape Verde. By J. V. Botelio da Costa.
(2, 3, 5) Proceedings of the Society.

Lübeck—Mittelhungen der Geographische Gesellschaft in Lubeck, heft 7, 1885. List of books and maps published in the State of Lübeck. Prepared by Dr. P. Friedrich.

Lyon—Bulletin de la Société de Géographie de Lyon. No. 11, Sept. to Dec., 1885.

Railway from Aosti-Martigny by the Great St. Bernard. By Baron de Vanthelevet.
Travels in the South of Germany and Italy in 1580 and 1581. By W Didelot
Reviews, &c.

Marseilles—Bulletin de la Société de Géographie de Marseilles, Nos. 10, 11, and 12, Oct., Nov., and Dec., 1885.

The Hawaiian Kingdom. By G. Bouliech.

The Alps of Provence. By M. Paul Gafford.
The Commerce of Corsica: its Advantages to Marseilles. By J. Mathiew.
The Wheat Commerce of Marseilles. By J. Mathiew.
Travels Classed for all Parts of the World.
  Africa.
  Asia.
  America.
  Oceania.
  Polar Regions.

The Summaries of Geographical news in this Journal in the Bulletins of the Royal Geographical Society of Belgium and some others are very interesting.

Montpellier—Société Languedocienne de Géographie. Bulletin, Vol. 8, 3rd and 4th quarters, 1885.

(3) Economic Consequences of the Climatic Phenomena of French Guiana. By M. L. Ferrard Viala.
(3) China and Tonquin, and Map. By M. J. L. Soubeira.
(3) The Geographical Distribution of the Eucalyptus and its Culture. By M. F. Sahut.
(4) View of Montpellier-le-Vieux.
(4) The Province of Languedoc in 1789. By M. H. Mouin.
(4) Notes of Travels in the South of Tunis. By M. V. Mayet.
(4) Agricultural Walks in France, Belgium, and Holland. By M. F. Couvert.
(4) The Eucalyptus and its Culture. By M. F. Sahut.
(4) The Senegal. By General Faidherbe.
(4) Chronicles of Malacca. By M. L. M. Devie.
(4) Canal from the Mediterranean to the Atlantic, and map.
(3, 4) Reviews, Varieties, and Geographical Chronicle.

Nancy—Bulletin de la Société de Géographie de l'Est, 1885. Second, third, and fourth quarterly numbers.

(2) Scientific Expedition to Algeria and Morocco. By M. R. Basset.
(2, 4) Exploration of the Zambesi. By M. P. Guyot.
(2) The Effects of Steam in the Atmosphere. By Lieut. H. Vignot.
(2, 3, 4) A Little Glossary for Use in the Study of the Topography of the United Kingdom. By M. Peiffer.
(2, 4) Six Days in Corsica. By M. A. de Metz-Noblat.
(2) The Meteorological Phenomena of Lorraine. By M. E. Obry.
(2) The Affluents of the Congo.
(2) M. M. Sokoloff's Observations on the Formation of Dunes Considered.
(2) Lapland.
(2) Hydrography of the East Coast of Madagascar.
(2) The Cylindrograph. A New Photographic Apparatus.
(3) Inauguration of a Bust of Dr. Crevaux in the Botanical Gardens of Nancy, with illustrations and report of speeches at banquet.
(3) Commercial Exploration of Tonquin.
(3) Report of M. Grandidier on Several Publications Relating to Madagascar.
(3) The Esquimaux.
(3) The Roman Frontier in Germany.
(3) Prehistoric Monuments in Micronesia.
(3) Periodic Variations of the Alpine Glacier.

(3) Map of the Prairies of Guyenne.
(4) Travels in Indo-China. By Dr. Neis. With map.
(4) Notes on Cambodia. By Lieut. H. Vignot. With map.
(4) Tonquin: Its Manners and Customs. By M. Paris.
(4) Some Information on the Pescadores Islands. By M. G. F. Novi.

New York—Bulletin of the American Geographical Society. 1885. Nos. 1 and 2.

(1) On the Nomenclature of Cities and Towns in the United States. By D. D. Frior.
(1) How the Settlement of North America has Affected its Wild Animals. By E. Ingersoll.
(2) John Cabot's Landfall. Site of Novembeja, enriched with a number of sketch-maps copied from old maps of North America. By Professor E. N. Horseford.
(2) Life and Scenery in the Far North. By W. Bradford.

Oran—Bulletin de Géographie Société de Géographie et d'Archiologie de la Provin d'Oran. Tome 5, No. 25, April-June, 1885; Tome 5, No. 26, July-Sep.

(25) Notes on Tafilat.
(25, 26) Travels in the Oasis of Zeban, Algeria, with nine illustrations.
(26) Inscription of V. Rufinus at Rome.
(26) The Governors of Mauretania. By C. P. de Lessert.
(26) Archæological Travels in Tunis. Inscriptions discovered by M. Winckler, with numerous engravings.
(26) The African Provinces: a Chapter of Roman History.
(26) Deaths: Notices of the late M. Leon Regnier, General Secretary; M. de Foulques.

Paris—Société de Géographie, Nos. 16-17, 18, 19-20, 1885.

(16-17, 18, 19-20) Geographical Correspondence.
(16-17, 18) Geographical Notes.
(19-20) Oral Communications.
(16-17) Journey to the Store Börgefjeld and to the Peninsula of Vrola. By M. Ch. Rabot.
(16-17) The French Ancestor of the Chief of Bucharia. By M. R. du Caillaud.
(16-17) Travels of Capello and Ivens.
(16-17) Notes of M. de Threnau (French Consul Cape of Good Hope) on the Travels of Capello and Ivens.
(16-17) Special Reception by the Society of MM. Capello and Ivens.
(16-17) An Epidemic in Canada in the Time of Jacques Courtier (December, 1535, to April, 1536). By M. R. du Caillaud.
(16-17) Danish Expedition to Greenland. By M. Hansen-Blagsten.
(18) Letter from M. Fourneau upon the Region of the Basin of L'Ofôoné Central Africa.
(18) Reception of M. de Brazza at Zanzibar.
(19-20) Two Letters from Major Serpa Pinto, at 40° 33′ 32″ S. lat., 40° 40′ 15″ E. long., to M. A. d'Abbodie, of the Institute.
(19-20) Letters from the explorer M. A. Thouer to the French Consul at Assumption, Paraguay, and Report of M. Mancini, the Consul at the latter.

(19-20) Upon Certain Rights of France in Africa (West Coast). Letter from M. Albert Merle to M. Henri Duveyrier. This is an important communication, showing the historical claims of France (with reference to old maps) to certain points of advantage for factories, trade, and settlements on the West Coast.

Paris—Bulletin de la Société de Géographie. Second, third, and fourth quarterly parts. 1885.

(2) Report upon the Work of the Society and upon the Progress of Geographical Science during the year 1884. By M. Charles Mannoir.

(2) The Algerian Region Traversed by the Meridian of Paris. With maps, orography, hydrography, geology, meteorology, roads, military roads, and tribes. By Commander Derrien.

(3) Report on the Distribution of Prizes given by the Society.

(3) Travels to Lotos, 1883-4 (Indo-China). By Dr. Paul Neis. With elaborate maps of the rivers on the east side of the peninsula.

(3) Seven Months in the Tin Country of Perak, peninsula of Malacca. By M. J. E. de la Croix, C.E. Valuable Mining Notes.

(4) Atché and Pérak (Sumatra and Malacca). By B. de St. Paul Lias. With map of river Lohong, Sumatra.

(3) Chiriqui—Bora del Tor—Valle Miranda—Isthmus of Panama. By M. A. L. Pinart. With sketch-map.

(4) Sketch of the Geography and Ethnology of French Guiana, from the Explorations of Dr. Creva, and of the basis of the Yari and Péron, affluents of the Amazon. By M. Ch. Vélain. With geological map of French Guiana and part of the Lower Amazon.

(4) Senéze and Noetzli's Travels in the Republic of Equador, 1876-7.

——— Bulletin de la Société de Géographie Commercial de Paris. Tome 7, 1884-5, No. 4.

Communications.
West Africa, Map of French
The Great Lakes of Equatorial Africa.
The Amazon Regions.
Notices upon Future Commercial Entrepôts of Tonquin.
The Federation of the English Colonies.
Articles of Exchange in Africa.
Progress of Russian Colonisation.
Central Asia.
The South African Republic, &c., &c.
Correspondence, Proceedings, Reviews, &c., &c.

——— Rěvue Géographique Internationale. Edited by M. Georges Renaud. No. 122, December, 1885.

The French Abroad.
Travels in the Caucasus.
The Alpinists at Turin. Illustrated.
The North American Transcontinental Railways.
The Canadian do.
Do. do. with map.
The Surinam People.
The British North Borneo Company's Charter of Incorporation, &c., &c.

Rochefort—Bulletin de la Société de Géographie de Rochefort. Vol. 6, 1865-6. No. 3, January, February, March ; No. 4, April, May, June

(3) Dr. C. Maisonneuve, late President of the Society.

(3) Notes upon the International Circumpolar Expeditions. By Lieut. M. Bellot.

(3, 4) Proceedings of the Society, Reports, Reviews, and Geographical Notes.

(3) An Ascent of Vignemale in the French Pyrenees. By M. G. Regelsperger.

(3) Bibliographies.

(3) The Western Islands and the West Coast of Iceland. By Dr. A. Theze.

(3) Bibliography of Indo-China for the year 1884.

(4) Earthquakes. By M. Biteau.

(4) Study of the Peruvian and Bolivian Affluents of the Amazon. By M Thomas.

(4) Study of the Head of a Urus (ox) found in the Charant in 1884. By M. E. Jardin.

(4) Foochow and the Min River.

(3, 4) Explorations in Africa during the 19th Century. By M. Magean.

Africa Generally and Trade Routes.
The Soudan.
Senegambia.
The Sources of the Niger.
The Sahara.
The Nile Region.
Stanley at the Great Lakes.
Gessi at the Albert Lake.
Abyssinia and Obrock.
Egypt.
Basin of the Zambesi.
Travels Across the Continent—Cameron and Stanley.
Southern Africa.
Guinea.
The Gaboon and the Ogowai.
The Present Results.

Rouen—Société Normandé de Géographie. Bulletin for 1885. No. 1, March-April No. 2, May-June; No. 3, July-August; No. 4, September-October No. 5, November-December.

(1) The Normans in the Northern Islands. By M. G. Garier.

(1) Travels from Fonta-Diallon to Bambone. By M. E. Noirot.

1, 2, 3) Ethiopian Exploration : Itinerary from Ankober to Kaffa. By P. Soleillet.

(4) And from Kaffa to Ankober.

Notices of—

(1) Dr. Camille Maisonneuve.

(2) Gustave Nachtigal.

(2) Albert Mort-Guernet.

(3) Joseph Alfred Brigalant.

(3) Etienne Auguste Thovel.

(2) Travels, Adventures, and Captivity of J. Bonnat among the Ashantees By M. P. Guernet.

(3) The Half-Breeds in the North-West of America.

(3) Riel. By M. U. Sulte.

(3) The Voyage of the Flamme Rouge—Yunnan and Tonquin.

(3) The Black Continent and the New Political Colonial Policy.

(5) Development of Canada. By M. B. Sulte.

(5) Manners, Customs, and Languages of the Negritos of Malaysia, with extensive vocabularies. By M. J. de Morgan.

(5) Ethiopian Explorations. By M. P. Soleillet.

(5) Necrology.—M. Alfred Divez and M. Emile Lebizre.

(1, 2, 3, 4) Correspondence.

(1, 2, 3, 5) Proceedings.

St. Petersburg—Izvyestiya Imperatorskova Russkova Geographicheskova Obschestva. Tom. xxi. S. Peterburg, 1885. No. 4.

N. D. Jurgens: Expeditions to the Mouth of the Lena, from 1881 to 1885, with maps of the delta of that river.

G. N. Potanin: Commemoration of the Death (*pominki*) of Jingis Khan, with illustration of his tent at Ikhi-Edjen-Khoro.

Brief Reports of the Society's Expeditions.

No. 5.

A. V. Elisyeër: Anthropological Expedition into the Sahara, through Tripoli, Tunis, and Algiers.

Survey of Proceedings of Branch Societies (1) Caucasus branch, (2) East Siberian branch, (3) West Siberian branch.

Brief Report of Society's Expeditions.

View of Ruins of Akhir-Tash.

Tours—Société de Géeographie de Tours Revue. Edited by M. Albert-Trochou. 1885. Nos. 1 to 12.

(1, 2) On the Method of Teaching Geography to Children. By M. O. Pavette.

(1) The Ancient Geography of Touraine. By M. D. Rebut.

(1, 2, 3, 5, 6, 7, 8, 12) Proceedings, &c.

(1 to 12) Meteorological Reports.

(2, 3) The Insurrection in the Soudan, with maps.

(3, 4) New Geological Theories in Reference to Iceland. By M. V. Meynard.

(4) The Past, Present, and Future of the Independent People of South America. By M. de Garros.

(4, 5) Ethnographical Notes on the United States of Colombia. By M. C, Christensen.

(4) A Geographical Document of the 4th Century. By M. F. D.

(5) Transcaucasia and Afghanistan. By M. A. D. de Saint-André.

(5) Peter Bulow, Naturalist and Traveller, 1517-1564. By M. A. Chauvigné.

(5) The Mail Routes of the Pacific. By M. C. Pra.

(6) The Free States of the Congo. By M. J. Zietara. With map.

(7) South-West Africa and the French Congo. By M. Dutreiul.

(7) The Colonisation of Indo-China. By M. E. Boulanger.

(8, 9) Conversation upon the African Interior Sea (the Chotts). By M. de Costa.

(10) Travels in the Piræus, Crete, and the Cyclades. By M. de Coutouly.
(11) Study of the Orography and Hydrography of the Department of the Indre-et-Loire. By M. Bardet.
(12) Is Alise-Sainteé-Reine the Alaise-Séquard of Cæsar? By M. Boulanger.
(12) French Chambers of Commerce Abroad, viz., Alexandria, Barcelona, Brussels, Buenos Ayres, London, Liverpool, &c.
(12) The Australian Expedition to New Guinea. By A. Trochou.
(12) Suez Canal: Movement of Shipping.
(2) Reports.
(12) Reviews.
(3) Colonial Chronicle.
(3, 5, 6, 7) Geographical Chronicle.
Report for Year 1885.
List of Members and Rules of Society.
Corresponding Societies.

Tours—Union Géographie du Central Société Géographie de Tours. Report and Proceedings for 1884.

France in the Further East.
Discovery of an Ancient Sea in the Interior of Africa, and map.
Winter Pasturage in the Rocky Mountains, U.S.A.
Mexico of To-day.
Travels in Malaysia, Java, &c., and map.
Conference on Political Economy.
Vera-Crux.
Revué Caillié.
The Forest of the Spree (Spreewold).
The Ancient Geography of Touraine, and map.
An Excursion to the North of Ireland.
The Sahara and its People.
Notes on the Géographie of the Centre (France).
The Congo Question.
The Indian Territory of the United States.
Tunis, Travels in
The Superficial Area of the Sea.
Report, Rules, and List of Members.
Reviews and other interesting short papers.

MISSIONARY SOCIETY NOTICES.

The Chronicle of the London Missionary Society. No. 46 (October) and No. 47 (November) 1885.

(46) The Kuravars-Travancore. By Rev. W. Lea. With illustrations.
(46) South Bechuanaland. Notes of a Short Tour by Rev. A. J. Wookey.
(47) The Central African Mission. With illustrations.
(47) South Bechuanaland.

The Missionary Field. Organ of the Society for the Propagation of the Gospel. Vol. 30, No. 359, November, 1885; No. 360, December, 1885.

(359) Qu'appelle. With three illustrations.
(359) Rambad, India.

(359) Maritzburg.
(359) Baralong Translations of the Rev. Canon Crisp.
(359) St. Thomas's College, Colombo.
(360) Roorker. Religious Fairs.
(360) Kaffraria, Sons of Heathen
(360) Kaffraria, Chiefs in the Mission School.
(360) Bloemfontein. Sketch of the District.
(360) The Aborigines of Australia.
(360) Mauritius.
(360) Madagascar.

The Missionary Herald of the Baptist Missionary Society. November, 1885. December, 1885.

November—
Indian Washerman. Illustrated.
The Congo Mission. Illustrated. Letter from Rev. G. Grenfell, Stanley Pool.

December—
Visit to Dinazepore. Illustrated.
Bengal Ferry Boat. Illustrated.
Bengal River Steamer. Illustrated.
Indian Fisherman. Illustrated.
The Congo Mission. Letter from Rev. T. J. Comber, Boma.
Suttee Memorial in Agra. Illustrated.

The Universities Mission to Central Africa. Central Africa, a Monthly Record of the Work of the Universities Mission. No. 35 (November), No. 36 (December), 1885.

(35) The Bishop (Smythies) on the Zambesi. Contains an account of the launching of the Charles Janson boat on Lake Nyassa.
(35) What Others are Doing.
(35) The University Scheme.
(36) The Bishop on Lake Nyassa.
(36) A Note for the Anti-Vaccination Society.

St. Joseph's Foreign Missionary Advocate and Record of Life and Suffering in Heathen Lands. No. 11, 1885, summer quarter. No. 12, 1885, autumn quarter. No. 13, 1885-6, winter quarter. Illustrated with views and sketch maps.

(11) Benin: Two Fathers of the Society of African Missions have made a journey of eighteen months into the interior from Benin, and were everywhere hospitably entertained. They visited the King of Yoruba, who gave them a piece of ground in the middle of his capital for mission purposes.
(11, 12, 13) A Notice of the Life, Work, and Travels of the Rev. Wilfrid Reynolds, a Missionary to China, and who was a native of Lancashire.
(11, 12, 13) A Memoir of Mgr. Cambrai, the Apostle of the Soudan, and his Travels in the region, and the Institutions founded by him. With sketch map showing the Congo, Great Lakes, and the Nile.
(11) The Jesuit Mission to the Zambesi. With sketch map.
(11, 12, 13) The Kanowitz Mission, and an Interesting Account of Dyak Manners and Customs. With sketch map of N. Borneo, and views.

(13) An Account of the Massacre in East Cochin China, in about 300 villages of 18 Priests and 31,000 Native Christians.

(13) The Number of Catholics in Russia and other Countries, as given in "Werner's Katholichen Missions Atlas, 1885," is as follows:—

Russian Poland	4,572,958
Russia in Europe	2,882,991
Russia in Asia	51,627
Balkan Peninsula	490,000
Turkey in Asia	554,380
Persia	17,000
Egypt	82,000
Abyssinia	12,000
Total	8,662,956

(13) Particulars of the Exposure of Infant Children in China given, with sketch map showing district where this practice prevails.

A LIST OF THE OF MAPS AND BOOKS PUBLISHED BY THE GEOGRAPHICAL SURVEY OF NORWAY, 1885 (Presented to the Society by the Royal Geographical Institute of Norway, Christiania, referred to in the previous Journals).—Christiania Gróndahl and Sons, Printers.

The Norwegian Pilot. Published by the Geographical Survey.

Part 1.—Containing the Coast-line from the Ide Fjord to Jomfruland. By C. F. Wille. 1871.

Part 2.—Jomfruland to Christiansand. By J. S. Fabricius. 1880.

Part 3.—Christiansand to Stavanger. By C. F. Wille, First Lieut. R.N. 1867.

Part 4.—Stavanger to Bergen. By C. F. Wille, &c. 1868.

Part 5.—Kors-fjord and Bergen to Utrær. By J. S. Fabricius, First Lieut. R.N., Chief of Hydrographic Section. 1883.

Part 6.—From the Sogne Sea to Aalessund. By Captain R. M. Petersen. 1885.

Part 8.—From Trondhjem to Russian Frontier. By Captain J. S. Fabricius. 1885.

Description of the Tromsó District (*amt**) from expeditions undertaken in 1869, 1870, and 1872, for the purpose of maintaining order between the Nomadic and Settled Lapps. Published by the Geographical Survey. 1874.

Historical Account of the Geographical Survey of Norway, from its establishment in 1773 to the close of 1876. By C. M. de Sene, Captain and Adjutant Royal Norse General Staff. Published by the Geographical Survey. 1878. Maps.

General Map. (1 : 2,000,000) General View, based on General Maps. Scale, 1 : 400,000, and Maps of the *Amter* (provinces). 1 : 200,000. 1885.

Norway. General Map, relations of depths and heights. Scale, 1 : 2,400,000.

General Map (1 : 2,000,000) to Topographical Chart of Kingdom of Norway (rectangular charts), of 1 : 100,000. 1886.

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* Norway is divided into 20 *amter*, provinces or districts.—Edit.

Geological General Map of South Norway, based on Geographical Survey Map of 1 : 1,000,000. Geological Survey. 1877.

General Map (of 1 : 2,400,000) to the Coast Charts published by the Norwegian Geographical Survey. 1885.

GEOLOGICAL MAPS.

26A. Hamar. Geological Survey. The revision of the Chart continued by T. Kjerulf, Alfred Getz, P. Krohn, 1881-3, with S. margin of the Chart by J. Vogt, based upon "Map of a portion of the neighbourhood of Mjös," by Th. Kjerulf and M. Irgens, 1870.

14B. Mos. Geological Survey. Revision of the boundaries, with assistance of Th. Kjerulf and M. Bugge.

19B. Hönefos. Geological Survey by Prof. T. Kjerulf. Revision of boundaries, with assistance of J. Friis, T. Lassen.

22B. Hans. Geological Survey, 1880. Revision of Chart by Th. Hiortdahl, in some points by M. Irgens, on basis of "Geological Chart of Neighbourhood of Bergen," by Hiortdahl and Irgens. 1861.

25B. Gjövik. Geological Survey. Revision of Chart by Kjerulf, Krohn, and by O. Hagen. 1881-3.

46B. Melhus. Geological Survey. Revision of boundaries by Kjerulf, Bugge, Schulz, and Vogt.

10C. Sarpsborg. Geological Survey, 1879. With revision of boundaries by Mortensen, Thomassen, Vogt, and Wille.

46C. Terningen. Geological Survey. Chart coloured after the key-maps by Hann and Kjerulf, 1875. Revision of chart, E. by Bugge, W. by Johnsen. 1882.

47C. Stjordalen. Geological Survey. Revised by Bugge, 1880-1.

14D. Christiania. Geological Survey. By Professor Kjerulf. Boundaries partly by Corneliussen.

16D. Bergen. Geological Survey, 1880. Revised by Hiortdahl, some points by Kjerulf and Friis. Based on "Geographical Chart of Bergen District." By Hiortdahl and Irgens. 1861.

46D. Trondhjem. Geological Survey, 1879. Revision of boundaries by Bugge.

47D. Meraker. Geological Survey. Revised by Kjerulf and Bugge, 1881-2. S. for Tevldal by Hagen, 1882, utilising observations of Haman, Friis, Schiötz.

49B. Skjörn. Geological Survey Chart. Coloured generally according to general maps of Hanan and Kjerulf, 1875. Revised by Bugge, 1881.

50A. Levanger. Geological Survey. Revised by Kjerulf and Bugge, 1880-1.

50C. Stenkjær. Geological Survey. Revised by Bugge. Based on general maps of Hanan and Kjerulf, 1875.

9D. Tönsberg. Geological Survey. Revised by Bugge.

TOPOGRAPHICAL CHART.

Topographical Chart of the Kingdom of Norway. 1 : 100,000. By Geographical Survey, in 44 sheets.

GENERAL CHARTS.

1. Norse Coast. - Færder to Udsire. Geographical Survey, 1885. W. plate, Mandal to Udsire; E. plate, Færder to Mandal.

1. General Chart. Norse Coast. Kinn to Trondhjem. Geographical Survey. Christiania, 1884. 1 : 350,000.
2A. Ditto, Udsire to Kinn. 1 : 350,000.
5A. Tromsö to Russian boundary, with adjoining coast of Russian Lapland to Kola, 1849.
1B. Norse Coast. Christiania to Ide Fjord and Jomfruland. 1871. 1 : 200,000.
2B. Based on Trigonometrical Survey—Jomfruland and Kragerö to Christiansand. By Lieut. Schie. 1857.
3B. Christiansand to Ekersand. 1859.
4B. Haltenöe to Leköe. 1835. 1 : 200,000.
5B. Leköe to Donnæsöe, &c. 1835. 1 : 200,000.
6B. Donnæsöe to Fleina and Sandhornet. 1837. 1 : 200,000.
7B. Fleina and Sandhornet to Tranö. 1839. 1 : 200,000.
8B. Tranö to Eisund, &c. 1842. 1 : 200,000.
9B. Indö and Eisund to Kvalö. 1849.
10B. Kvalö and Grölsund to Sövöen. 1844.
11B. Sövöen to North Cape. 1845.
12B. North Cape to Tanahorn. 1847.
13B. Tanahorn to the boundaries of Russian Lapland. 1848. 1 : 200,000.

SPECIAL CHARTS.

1B. Christiania Fjord, Hankö to Torbjörnskjær and Ide Fjord. Published by Geographical Survey. 1868. 1 : 50,000.
2B. Bastö to Little Færder. 1867. 1 : 50,000.
3B. Drammen and Dröbak to Bastö. 1866. 1 : 50,000.
4B. Christiania to Dröbak. 1865. 1 : 50,000.
5B. Tönsberg Tönde to Jomfruland. 1870. 1 : 50,000.
15B. The Norse Coast, Reef of Jæderens to Tanangerhaug. 1862. 1 : 50,000.
16B. Tanangerhaug to Skudes Næs. 1864. 1 : 50,000.
17B. Skudes Næs to Rambeskaar Fjeld. 1864. 1 : 50,000.
19B. Ryvardensfyr to Hisken. 1885. 1 : 50,000.
20B. Hisken to Stolmen. 1871. 1 : 50,000.
21B. Stolmen to Lyngö and Rangnene. 1872. 1 : 50,000.
22B. Lyngö and Rangnene to Blomö. 1871. 1 : 50,000.
23B. Blomö to Ronglevær. 1872. 1 : 50,000.
24B. Ronglevær to Utvær. 1872. 1 : 50,000.
25B. Utvær to Haastenen. 1873. 1 : 50,000.
26B. Haastenen to Little Batalden. 1873. 1 : 50,000.
27B. Little Batalden to Bremanger. 1874. 1 : 50,000.
28B. Bremanger to Stadt. 1874. 1 : 50,000.
29B. Stadt to Rundö. 1875. 1 : 50,000.
30B. Ulfsten to Sövde. 1875. 1 : 50,000.
31B. Rundö to Lepsö. 1876. 1 : 50,000.
32B. Lepsö to Ona. 1879. 1 : 50,000.
33B. Molde and Romsdal Fjord. 1877. 1 : 50,000.
34B. Ona to Fuglen. 1879. 1 : 50,000.
35B. Fuglen to Tustern. 1880. 1 : 50,000.
36B. Tustern to Tyrhang and Smölen. 1881. 1 : 50,000.
37B. Tyrhang to Terningen. 1883. 1 : 50,000.

38B. Terningen to Beian and Rödberg. 1884. 1 : 50,000.
— Rambeskaar Fjeld to Ryvardens Fyr. 1865. 1 : 50,000.
7B. The Region about Engelvær, Lövövær, and Valsvær, and inwards as far as Grötö. 1882. 1 : 50,000.
2. Norse Coast, Dyrö to Gibostad, by Ræhke. 1880. 1 : 50,000.
1. Norse Coast, Gibostad to Ryström and Hekkingen, by Ræhke. 1878. 1 : 50,000.
1A. Norse Coast—Jomfruland and Kragerö to Arendal. Based on trigonometrical observations in 1853-4, and hydrographical survey, and verified by Lieut. C. Dirkis, R.N. Compiled under direction of Royal Norwegian Governmental Department for the Interior, under direction of Survey by Vibe, Engineer-Major. 1855. 1 : 100,000.
2A. Arendal to Christianssand. 1856. 1 : 100,000.
3A. Christianssand to Lindes Næs. By Lieut. Schie, R.E. 1857. 1 : 100,000.
4A. Lindes Næs to Ekersund. 1858. 1 : 100,000.
5A. Ekersund to Hvidingsö-Fyr. 1860. 1 : 100,000.
6A. Hvidingsö to Esperær. 1865. 1 : 100,000.
7A. Esperær to Kors Fjord. 1865. 1 : 100,000.
8A. Kors Fjord to Hellisö. 1868. 1 : 100,000.
9A. Hardanger Fjord. 1865. 1 : 100,000. Two sheets.
10A. Hellisö Fyr to Alden. 1872. 1 : 100,000.
11A. Sögne Fjord. 1869. 1 : 100,000. Two sheets.
12A. Alden to North Fjord. 1874. 1 : 100,000.
13A. North Fjord to Rundö. 1875. 1 : 100,000.
14A. Rundö to Ona. 1883. 1 : 100,000.

Chart of the North Sea. 1875. Two sheets.

The Neighbourhood of Christiania. 1 : 25,000. Six sheets (1 to 5 received).

General Chart of the South of Norway, in 18 sheets, published 1868-85 (1 to 8 received).

Chart of N. Norway, from the best available sources, especially the astronomical and geodetical observations for the Topographical and Hydrographical Survey of Norway, executed to a scale of 1 : 700,000 of the real size. By P. H. Munch, Prof. Univ. Christiania. 1852. Two sheets.

Chart of Tromsö Amt. Compiled from the observations undertaken in the years 1869, 1870, 1872, published by the Geographical Survey. Scale, 1 : 200,000. Four sheets.

Chart of Romsdal Amt. 1882. 1 : 200,000. Four sheets.

Chart of Northern Bergenhus Amt. 1880. 1 : 200,000. Four sheets.

Chart of Nede Næs and Robygdelagets Amt. By Capt. Ijessing, R.A. 1858. 1 : 200,000. Two sheets.

Stavanger Amt. By Capt. Ijessing, R.A. 1866. 1 : 200,000. Two sheets.

Christiania Amt. By Capt. Ijessing, R.A. 1845. 1 : 200,000. Three sheets.

Charts of the sea banks along the Norse coast from Staadt to Smölen. 1873. 1 : 200,000. Two sheets.

Charts of the sea banks along the Norse coast from Stadt to Harö. 1870. Four sheets.

Fishery Chart of interior part of West Fjord and the Lofoten Islands. Christiania, 1869. 1 : 100,000. Four sheets.

Profile sections to the above Chart (eight sections). One sheet.

Chart of inward navigation into—
- B11*a*. Sælöer, Korshavn, Ullerösund, Lodshan, Ekvaag, and Farsund.
- B13B. Ekersund.
- B12A. Flekkefjord.
- B13A. Sogndælstrand and Reke Fjord.
- B12B. Rasvaag and Kirkehavn.

One sheet.

- 9*a*. Christiansand.
- 10*a*. Mandal and Risörbank Harbours.
- 9*b*. New Hellesund.
- 10*b*. Svinör (one mile east of Lindes Næs).

Chart of Hedemarken Amt. 1829. 1 : 200,000. Three sheets.
Chart of Buskerude Amt. 1854. 1 : 200,000. Two sheets.
Chart of Söndre Bergenhus Amt. 1867. 1 : 200,000. Two sheets.
Chart of Nedenæs Amt. 1856. (Incomplete.) One sheet.
Chart from Villa Fyr (64°·30′ N.) to Tviberg (62° 20′ N.). One sheet.
Chart of Grevskabern Amt, by Capt. Gjessing. 1860. 1 : 200,000. One sheet.
Chart of Smaalehnene Amt. 1826. 1 : 200,000. One sheet.
Chart of Akershus Amt. 1827. 1 : 200,000. One sheet.

The total number of Sheets is 192.

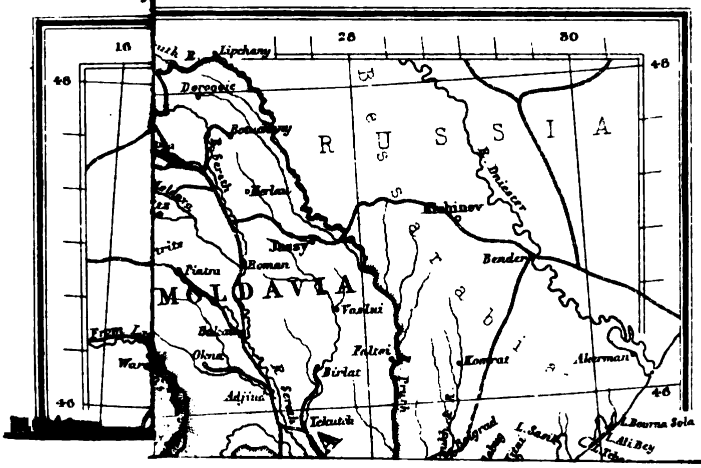
NOTICES TO MEMBERS.

The Title Page and Index to Volume 1 of the Journal will be issued shortly.

Geographical Notes.—Several pages of Notes have had to be withheld from this number from press of matter.

Exhibition of Geographical Educational Appliances.—The Exhibition of Appliances, Maps, Globes, Telluria, Models, Text-books, &c., lent by the Royal Geographical Society, with numerous additional and interesting exhibits, will be open from the 16th March to early in April.——Catalogues, price 6d. each, may be had at the place of exhibition, the Manchester Corporation Art Gallery, Mosley Street.——Addresses, Conversations, and Conferences will be held at the exhibition, which will be daily advertised.

Education Committee.—The Report of the Committee to the Council of the Society, with three Appendices, on the Geographical Teaching in this District, may be had separately, price 6d. each.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Komrat
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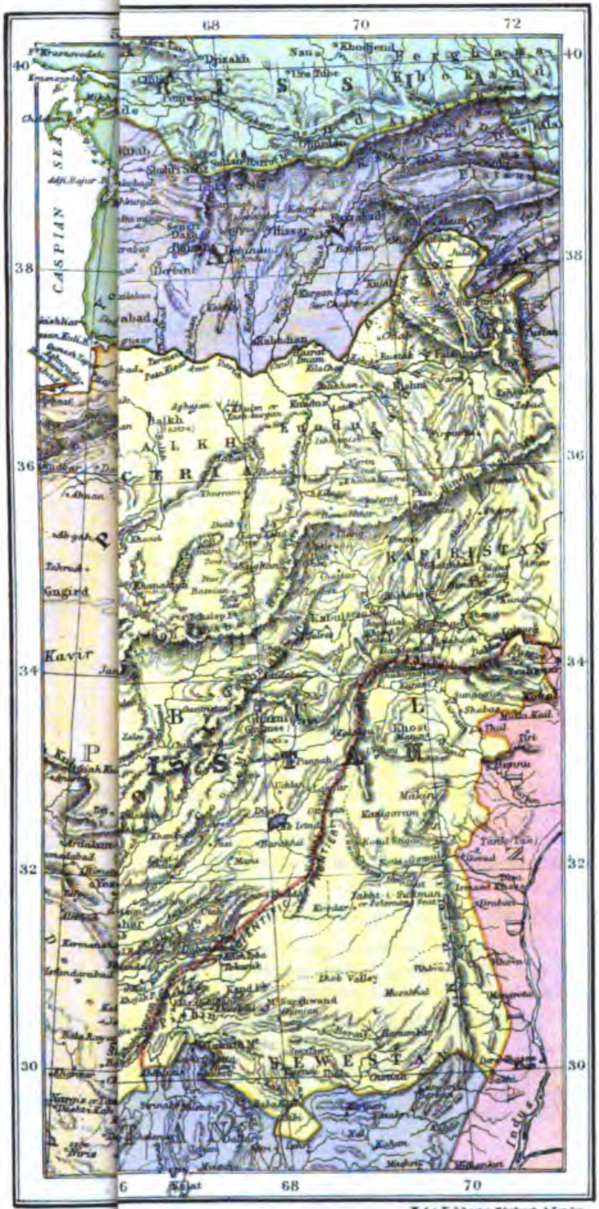


W. & A. K. Johnston, Edinburgh & London.

eluchistan Purple. India Lake.

A AND AFGHANISTAN.

ISTAN

ER OF INDIA.

ndia and Afghanistan.

ons; on the east by India; on the south by Beluchistan; and

dth, from north to south.
is a tableland with an elevation of 3000 to 5000 feet, the north
are the Paropamisan, Ghor, Koh Siah, and Hindu-Kush. The

Heri-Rood; the Murghab; and the Amu Daria or Oxus, which forms

he heat is very great; in the north it is moderate; rain is deficient
s the peaks of the higher mountains.
are saltpetre and alum, but some of the precious and useful metals

ne use. The surface of the country and the absence of good roads

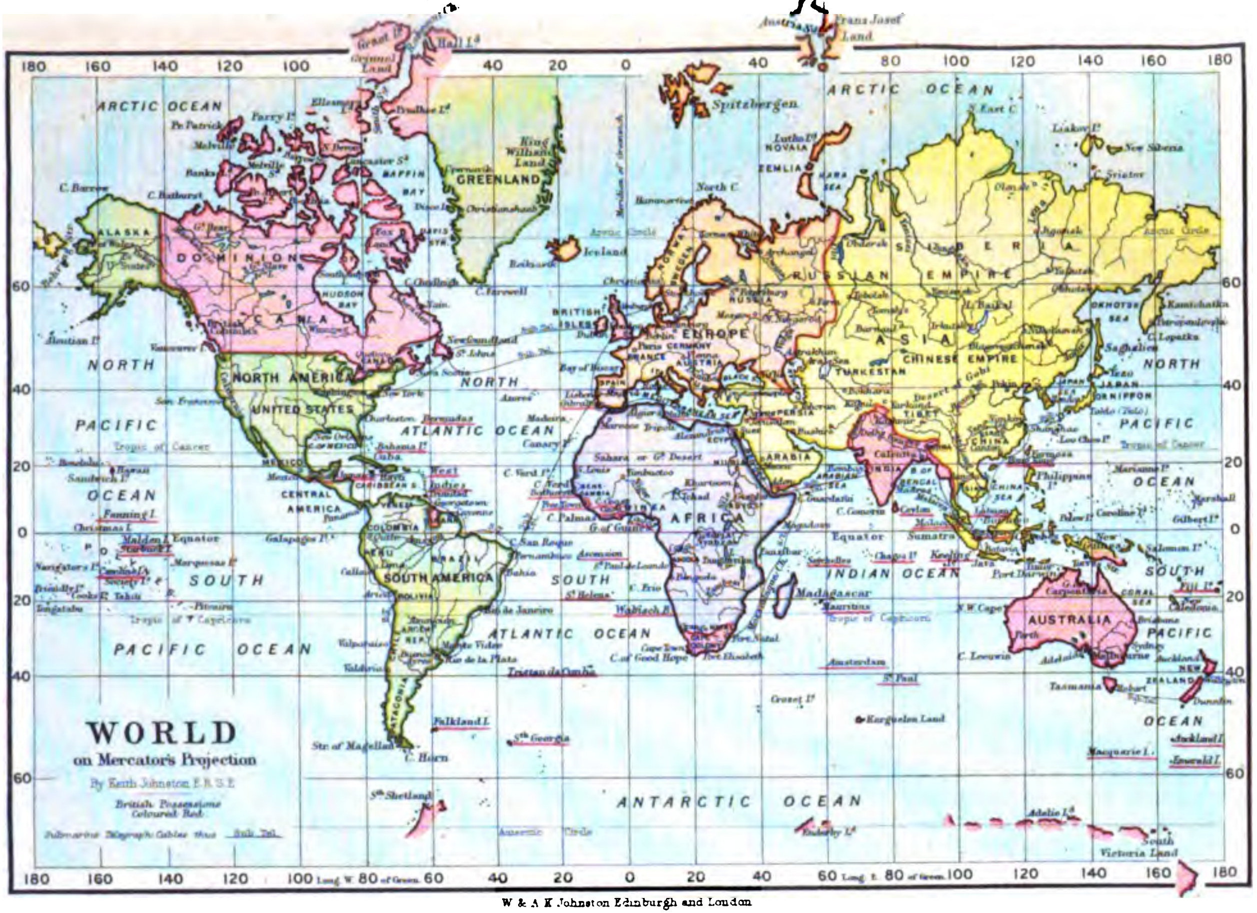
present is the Amir Abdurrahman Khan, elected in 1880, on the
ted on the Kabul River; the other towns are Herat, Kandahar,
about £400,000, besides a subsidy from the Indian Government of
n are armed with breech-loading rifles supplied by the British
geneous. In the Herat Principality the Afghan population is

about £600,000.
at the mouth of the Khyber Pass, and the other, after passing
l Government, but was abandoned by their successors, but has

t connection with the Russian railway system. It is being pushed
f Afghanistan as soon as our railway reaches the southern. The
ded English Railway terminus to Herat is 469 miles. The distance
to Candahar is 145 miles. The Scientific Frontier, sanctioned

d Kingdom, £262,600. Exports to the United Kingdom, £160,000.

POSSESSIONS ARE COLOURED RED.



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Map distributed at Mr Joseph Cowen, M.P.'s address to the Electors of Newcastle-on-Tyne, on Foreign Policy.

[P.T.O.

MAP OF THE WORLD

SHOWING

THE POSSESSIONS OF THE BRITISH PEOPLE

OVER THE SURFACE OF THE EARTH.

THE BRITISH EMPIRE covers an area five times the size of the Persian under Darius, and four times that of the Roman under Augustus. The following Table shows (approximately) its revenue, public debt, and commerce :—

Name of Country.	Area in Square Miles.	Population.	Revenue.	Public Debt.	Imports and Exports.
Great Britain and Ireland . . .	121,115	36,200,000	£89,005,000	£755,400,000	£719,680,000
Indian Possessions	1,558,254	256,000,000	80,000,000	100,000,000	122,000,000
Other Eastern Possessions . . .	30,000	3,850,000	3,000,000	2,800,000	28,250,000
Australasia	3,181,344	3,000,000	22,285,411	97,950,000	101,075,000
North America	3,620,500	3,620,500	7,100,000	34,000,000	45,700,000
Guiana, etc.	100,000	200,000	500,000	500,000	5,000,000
South Africa	270,000	2,250,000	4,400,000	13,250,000	23,000,000
West Indies	12,707	1,300,000	1,550,000	1,700,000	8,500,000
European Possessions	120	175,000	250,000	370,000	2,000,000
Various Settlements	96,171	200,000	500,000	650,000	2,000,000
Totals . .	8,990,211	306,795,500	£208,590,411	£1,006,620,000	£1,057,205,000

"Why cannot England and her congeries of commonwealths federate for their separate advantage and corresponding security? They present a surface vulnerable at many points, but few empires combine in an equal degree the danger of being stricken with the power to strike. The public business of England is the private business of every Englishman, and surely no weightier business can enlist their study than the security and prosperity of their native land and her affiliated provinces. It is incomparably more important to them as citizens, and to England as a nation, than the recriminatory topics on which political partizans love to ring the changes."

(Speech by JOSEPH COWEN, M.P., *Feb.* 14, 1885.)

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